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ABSTRACT

The Small College, the innovative unit of California State College, was established to test whether a substantial number of students could accelerate their progress toward the Bachelor of Arts degree. In the process of the experiment, it was hoped that the Small College would develop programs that could be of value to other colleges. The Small College opened in the academic year 1972-73, with the support of the Carnegie Corporation and the Office of New Program Development and Evaluation of the California State University and College System. As of fall 1974, the Small College had an enrollment of 285 students and a faculty of 15. The Small College faculty, in this document, seeks to communicate to the higher education community what the program has accomplished to date. Specific examples are given to convey a detailed sense of what is happening within the program and to illustrate its general purposes. Chapters cover: new approaches to curriculum; an alternative to freshman composition; interdisciplinary courses; less time, more options: (intensity week, variable unit courses, student-taught courses, peer tutoring, self-pacing); and the conclusions covering mentors and focusing on the student. Appendixes include examples of general education courses, areas of concentration, examples of individually taught interdisciplinary courses, examples of team-taught interdisciplinary courses, results of the student questionnaire, and some statistics about Small College students. (Author/PG)

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TWO YEARS OF THE SMALL COLLEGE:

AN EXPERIMENT IN STUDENT-CENTERED EDUCATION

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Prepared by the Small College Faculty with the assistance
of the Division of Institutional and New Program Development

California State College Dominguez Hills

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The primary focus of the Small College is to restore to the individual his central role in the educational process...The heart of the academic program will be individually tailored programs and experiences to meet the needs and desires of each student.

from the original proposal
for the Small College

PREFACE

The Small College, the innovative unit of California State College, Dominguez Hills, was established to test whether a substantial number of students could accelerate their progress toward the Bachelor of Arts degree as suggested in the report of the Carnegie Commission, Less Time, More Options (1970).[1] In the process of the experiment it was hoped that the Small College would develop programs that could be of value to other colleges.

California State College, Dominguez Hills, admitted its first students in the Fall of 1965. At present it grants both Bachelor's and Master's degrees and has an enrollment of over 5700 students. The Small College opened in the academic year 1972-1973, with support from the Carnegie Corporation and the Office of New Program Development and Evaluation of the California State University and Colleges system. As of Fall 1974, the Small College has an enrollment of 285 students and a faculty of fifteen.

In 1973, Dr. Willard Spalding prepared for the Carnegie Corporation an evaluation of the California State University and Colleges' innovative programs, Implementation of Pilot Projects for Planned Change, Office of the Chancellor, December, 1973. Dr. Spalding's evaluation report contains a history of the Small College and a discussion of the first year of its program. As the title of that report indicates, the Small College was to develop procedures which could be adopted by other California state universities and colleges. However, if the experiences of the Small College are to be of use to others, they must be communicated. It is to this purpose that the present report is addressed.

The Small College faculty, in this document, seeks to communicate to the higher education community what the program has accomplished to date. Specific examples are given in order to convey a detailed sense of what was happening within the program and to illustrate its general purposes. The faculty is under no illusion that everything the Small College has done is new; still, others may be able to learn both from the diversity of approaches tried and from the experiences gained while trying them.

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[1]Report of the Carnegie Commission on Higher Education, Less Time, More Options: Education Beyond the High School, November 1970. Compare Chancellor Glenn S. Dumke, "Some Proposals for Change in the California State Colleges," January 26, 1971; and Robert M. Bersi, Restructuring the Baccalaureate: A Focus on Time-Shortened Degree Programs in the United States, Washington, D. C., 1973.

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CHAPTER 1

NEW APPROACHES TO CURRICULUM

The Small College has chosen to introduce students to the various disciplines through the study of problems dealt with by those disciplines. The general education courses are oriented toward topics rather than surveying entire disciplines. Conventional "majors" in a single discipline have been replaced by four interdisciplinary Areas of Concentration: Civilizations; Human Studies; Science, Technology, and Society; and Environmental Sciences. For advanced specialized work Small College students complete a Thematic Project, a major project on a single theme of their own choosing. Finally, the significant learning that takes place outside the classroom is integrated into the student's program through Experiential Education.

General Education

Colleges commonly require students to spend the first part of their programs taking courses which give them a broad overview of several disciplines before they enter more specialized study. This is often done by requiring students to take a number of survey courses in specific fields. However, a survey course, because of the amount of material covered, often precludes in-depth investigation. The Small College, in planning general education courses, has chosen to select, rather than to "cover," and has tried to make selectivity into a strength. The Small College faculty believes that seeing a discipline applied to a problem gives a more concrete idea of the way a specialist in that discipline thinks and works than would an introduction to the major conclusions of that discipline. Accordingly, the Small College has developed general education courses oriented toward particular topics or problems.

This description of the Small College philosophy of general education will be more meaningful if the reader has some illustrations of the range and the depth of Small College general education offerings. For example, one course, "Time and Timing Devices," focused on a topic whose study requires concepts from physics, as well as some ideas from biology and astronomy. The wide applicability and interest of the topic helped overcome the traditional nonscience student's fear of courses labelled "physics." Nevertheless, the course conveyed as much about the way a physicist examines an idea as do traditional introductory courses in physics.

Another course, "The Experience of Death and Dying," using material from literature and the arts as well as from the disciplines of psychology and sociology, studied beliefs and behavior concerning the fact of death in various cultures. A third course, "Urban Problems," applied the perspectives of two disciplines, sociology and history, to selected problems in the urbanization of the United States.

Catalog descriptions of several more Small College general education courses are given in Appendix A. The topics covered are:

The Chemistry of Photography
The Hero as Madman: The World as Asylum
Human Sexual Function
Playgoing
Political Trials
Time and Timing Devices
Work in American Society

The Small College general education program is designed to comply with the mandated California State general education requirements. Students must take eight quarter units each in humanities, natural sciences, and social sciences; twelve in "basic subjects" (including mathematics, logic, speech, computer programming, and English composition); and twenty-four additional quarter units of electives, for a total of sixty quarter units. In addition, each student must take a course in American History and Institutions. The English composition requirement is met by the Writing Adjunct program, in which the student's regular courses provide the subject matter for learning how to write. (See Chapter II for a detailed description of the Writing Adjunct.)

Each Small College course is designated by its instructor, with the approval of the Curriculum Committee, as satisfying general education requirements in a specific area. Some courses which are interdisciplinary may apply to more than one general education category; for instance, "Darwin and Darwinism," which drew on biology and on the history of ideas, might count toward natural science or social science. Given the course designations, the Small College student may choose any courses that meet the general education requirements. With good advising and a wide range of courses from which to choose, students can select courses which speak to their individual interests.

Problem-oriented courses may not always be suited for students who want the courses as prerequisites for advanced work in the disciplines involved. In some cases, as in chemistry and sociology, the Small College has offered traditionally-oriented courses in addition to the problem-oriented ones. In other cases, Small College students have enrolled in regular departmental offerings of California State College, Dominguez Hills--more frequently, of course, in disciplines not covered by the Small College faculty.

Nevertheless, the Small College faculty believes that learning a discipline's approach proves more valuable to students than learning any specific set of facts; furthermore, the facts themselves can be more readily learned and remembered once the appropriate ways of thinking have been developed. Most faculty members accept the theory behind general education; Small College faculty and students are enthusiastic about the practice of general education.

Areas of Concentration

Each student in the Small College chooses one of the interdisciplinary Areas of Concentration, within which he designs, in consultation with his faculty advisor, a program suiting his individual goals, interests, or career plans. The interdisciplinary nature of the Areas of Concentration allows the student to orient his work toward a topic, a theme, or a traditional discipline. For example, a student in the Human Studies Area could focus on Urban Problems, on the history of urbanization, or on anthropological study. In each Area of Concentration, students are encouraged to learn the perspective of more than one discipline, and to supplement their work with courses from other Areas of Concentration. Many courses offered in the Small College are applicable to more than one Area of Concentration; for instance, "Darwin and Darwinism" is applicable to all of the Areas.

The flexibility of the Small College Areas of Concentration places considerable responsibility on students, who may be accustomed to having a set of requirements dictated to them. Obviously the system depends heavily upon the close faculty advising and monitoring provided by the Small College "mentor" system (described in the Conclusion) to prevent the student's program from being an educational smorgasbord providing neither unity nor intellectual growth. With good advising, the Small College Areas of Concentration provide the student with a choice of two distinct types of "majors"; an interdisciplinary course of study carefully prespecified in detail or an individualized program suited to the student's own interests.

To illustrate the nature of the Small College Areas of Concentration, short descriptions of three of them are given here: Civilizations; Human Studies; and Science, Technology, and Society. More detailed descriptions of these three, taken from the Small College catalog, may be found in Appendix B. The fourth Small College Area of Concentration, Environmental Sciences, is described fully in the text.

The Area of Concentration in Civilizations is designed to encourage students to explore the thought and institutions of one or more cultures, and through more than one time period. It can include work from a number of traditional disciplines: history, political science, sociology, anthropology, literature, philosophy, history of science, art, music, and religion. And, as with all areas of concentration in the Small College, it will include work that crosses the lines of all these disciplines to achieve a multidisciplinary approach. A Civilizations student may emphasize either the "history of ideas" or "institutions" or both.

The Area of Concentration in Human Studies allows the student to explore human existence from the perspectives of the social, behavioral, and biological sciences. Possible Fields of Emphasis which the student may select under the Human Studies Area of Concentration include: an interdisciplinary program in Social and Behavioral Science; International Relations; and, in the future, a Physician's Assistant Program.

The Area of Concentration in Science, Technology, and Society is designed both to provide students with a firm foundation in the understanding of science in general, and to offer students insights into the impact of science and technology on society. Depending on individual interests, students may design their programs in pursuit of a specialized field either in the applications or implications of science. This Area of Concentration includes three basic components: Basic Sciences; Perspectives on Science; and in-depth studies of particular topics.

The "Environmental Studies" Area of Concentration

A liberal environmental education can serve three distinct groups: those desiring to specialize in some aspect of the environment, those wishing to be environmental generalists, and those nonscientists sensitized to environmentally-relevant issues in their own lives and disciplines. The Small College program in environmental studies is designed for the generalist and for the student desiring an introduction to the environmental field.

Since single-discipline solutions to environmental problems seldom exist, the interdisciplinary response is a synthetic approach, replacing the emphasis on detailed dissection of a particular problem in terms of a particular discipline. Environmental complexity must not only be recognized, the recognition must be maintained, since studying the complex environment in any way but as a system will lead to reductionism and the development of possibly misleading theories.

In 1973-74, the first year of the Small College environmental program, a series of courses was offered that ranged over the spectrum of environmental problems and their solutions:

Environmental Courses

Fall Quarter
- Environmental Perspectives I (10)*
- Environmental Pollution: Solid (5)

Winter Quarter
- Environmental Perspectives II (10)
- Environmental Pollution: Water (5)
- Man & Environment (10)
- The Elixir of Civilization: Oil (5)
- Environmental Field Course (5 days)

Spring Quarter
- Environmental Perspectives (10)
- Environmental Pollution: Air (10)
- Dimensions of the Energy Crisis (10)

*numbers in parentheses refer to course length in weeks

The inclusion of courses on oil and energy in a listing of environmental courses is deliberate. Though their subject matter was concerned with broader-scale topics than just the environment, the environmental component was clearly significant.

All the courses shared many similar features. There was always a concerted effort to keep the courses from becoming too single-discipline oriented, and to look for problem statements and proposed solutions from as wide a range of viewpoints as possible.

Each course placed a heavy emphasis on student involvement. The class format was generally seminar, with the students always expected to participate actively in class discussions. Since effective participation was only possible if the student kept up with the day-to-day assignments, reading ahead of time was encouraged, e.g., all students handed in short written evaluations of the reading, one or more students being responsible for particular readings, etc.

A basic aim of each course was to help the student develop an ability to critically evaluate ideas. In a refreshing number of cases this ability did develop--as students came to recognize implicit assumptions in an author's word, to question statements, to consider whether data had been properly interpreted, and to weigh the worth of the author's conclusions against the sufficiency of his arguments and against the correlations with other sources familiar to the students. This ability to correlate showed up particularly well in students who took a number of courses and were able to relate things in one course to things in following courses--an obviously crucial skill in an environmental generalist.

Individual courses are discussed below. The general comments apply for each course and additional detail is provided where relevant. Textbooks were used, but they seldom provided the main reading material for the course. Though many environmental problems have long been recognized, only recently have materials become available that treat problems and solutions at a level between the "Sunday supplement" and the detailed, basic research article dealing with a very restricted subject area. Thus the interdisciplinary approach can best be satisfied by a selection of articles drawn from journals, texts, reference monographs, government documents, trial proceedings, etc.

Environmental Perspectives I, II & III

The core of the environmental studies program is represented by this year-long course. It was a team-taught course in the best sense of the word--the two instructors' interests and backgrounds complemented each other so that almost without fail whenever one did not know something, the other did. The backbone of the course was the new book Introduction to Environmental Science by K. E. F. Watt. The book was supplemented by another book and each chapter was accompanied by at least two journal articles. Each quarter had a different emphasis:

Fall: Physical & biological principles relevant to environmental science

Winter: Nonhuman systems in environmental science

Spring: Human systems in environmental science

The first two quarters each student wrote two 5-10 page papers; in the spring quarter a 20-page paper. In addition to this, students had typical responsibilities for in-class discussion which was a vital aspect of the entire course. By the end of the year, students had been exposed to a wide range of environmental topics and had become quite capable of vigorous, well-balanced discussions of them.

Environmental Field Course

During Intensity Week (see Chapter IV, pp. 37) a five-day field trip was conducted for the students who had completed Environmental Perspectives I and II. The central purpose of the trip was to develop an appreciation of the natural and man-made influences on the Colorado River Basin. The sites visited were:

--Boulder Dam (special tour)

--Colorado River trout fishery (special tour)

--Mohave Generating Station (special tour)

--Joshua Tree Geologic & Biological Tour

At frequent intervals between these sites, the class stopped to examine a variety of things--abandoned tunnel mines, operating open pit mines, desert flora and fauna, Indian petroglyphs, etc.

Without exception the students felt that this tour had made the abstract concrete for them and it did much to excite them to the real possibilities for environmental work.

Environmental Pollution: Solid

As an experiment, this course was run nearly as an independent reading course, with the students scheduled for "tutorials" on what they had been reading. During the five weeks the topics progressed as follows:

--Extent of Solid Waste Problem
--Sources of Solid Waste Pollution
--Transport of Solid Waste
--Sinks for Solid Waste
--Linear Programming Solutions to Solid Waste Collection
--Strategy of Resource Recycling

Each student wrote a paper reporting on his investigation of a local college's solid waste disposal practice--from its history, to collection, to economics, to final disposal.

Elixir of Civilization: Oil

This five-week course gave the students an integrated overview of the oil industry from the details of oil well types, to large tanker operation, to oil industry response to taxation, to the motivations of oil-consumer and oil-producer foreign policy. Environmental aspects were covered in discussing production, transportation, refining, and, more broadly, in the implicit choices this nation faces in decisions to use oil or its energy alternatives. Specific topics were:

--Nonrenewable resource depletion behavior
--Geology and production of oil
--Transportation (super-tanker and pipeline)
--Company structure and strategy of operation
--Case study: Alaskan oil
--Organization of petroleum exporting countries
--Effects in U. S. of Oil Embargo

By coincidence this course was the most immediately relevant of any course offered this year since it was given during the first five weeks of the winter quarter, right at the height of national concern about the oil embargo.

Environmental Pollution: Water

The problem of water pollution was presented via the following topical headings:

--Magnitude of water pollution problem
--Preparation of drinking water
--Treatment of sewage
--Decision making for control strategies for river basin pollution abatement

Although the course was only five weeks long, the material covered extended from the chemistry of water purification to the application of linear programming in choosing between control alternatives.

The class had an excellent field trip to an advanced water treatment research lab and sewage plant in Pomona.

Dimensions of the Energy Crisis

Complete coverage of the energy problem in 10 weeks is, like the complete coverage of any of the other environmental topics, clearly impossible. What was intended was coverage at as advanced a level as the students' backgrounds would permit and in as much depth as possible given the time constraint. Generally, if the choice was breadth or depth, breadth was chosen in order that the student would then have at least been introduced to a topic area.

The areas covered during the course were:

--The nature of policy decisions
--Energy production & consumption by sector
--Fuels (renewable and nonrenewable)
--Current energy sources
--Future energy sources
--Energy transmission
--Energy conservation
--National and State energy policy

As a term project each group of three students was assigned three different Final Environmental Impact statements for proposed nuclear power plants. The students were to divide the statements so that each student would read about the same topics in each of the reports and then they were to combine their papers to give a composite critique. In retrospect, reading three statements was too many; two would have been sufficient and allowed students more time to develop their ideas. Reading only one statement is not enough since the reader has nothing against which to compare the assertions made in support of the plant.

Environmental Pollution: Air

The general order of topics as covered in this course was as follows:

--Nature and Significance of the Air Pollution Problem
--Air Pollution Meteorology
--Health Effects (Plant & Man)
--Air Pollution Standards
--Air Pollution Control Techniques (Stationary & Auto)
--Control Strategies (Political, Technical, Economic)

The nature of the material made it very useful to utilize an extensive set of 35 mm slides for almost all of the topics covered.

A field trip to the Statewide Air Pollution Research Center, University of California, Riverside, was well received. The class toured the new large smog chamber and observed research on the effects of smog on various plants.

The Thematic Project

The Small College faculty, believing that there are other ways to master a subject than simply taking courses, requires its students to complete a "Thematic Project" in order to graduate. A Thematic Project is an individually-designed and substantial body of work on a particular theme, including courses and field work as appropriate, and culminating in the presentation of an evaluable product. Since the theme is chosen by the student, a Thematic Project provides students with an unusual opportunity to pursue their own interests and talents.

A Thematic Project may relate to a student's Area of Concentration, to his future career goals, or to some area in which he is interested but has never had the chance to pursue. The Thematic Project provides greater depth and individualization than either Independent Study or a minor.

The Thematic Project may be a research effort involving library work or a series of experiments; it may be a creative project, such as a musical composition, a series of paintings, or a dramatic production; or it may involve setting up a social-service program or a small business.

To insure academic validity whatever the project chosen, each student must present a concrete, evaluable product at the completion of his project. Ordinarily, the student is expected to complete 30-45 quarter units of work in the Thematic Project, comprised of four types of learning experiences: writing a proposal which clearly defines the project; taking course work to provide background knowledge needed to do the project; doing field work, library work, or experimental work, as appropriate; and completing the evaluable product.

When a student has completed about sixty units, he should begin selecting his Thematic Project topic and a faculty advisor upon whose continuous expert guidance and evaluation the student's progress will depend. Many students work with a team of faculty advisors, receiving guidance from faculty in regular departments at California State College Dominguez Hills as well as Small College faculty.

Once the student, with the aid of his advisor, has written his proposal, he submits it to the Thematic Project Committee. During 1973-1974, the committee consisted of seven faculty members (two from humanities, two from natural sciences, two from social and behavioral sciences, and the chairperson), a diversity of disciplines necessary for the committee to evaluate proposals from different fields. The committee judges whether the proposal clearly defines the

project, whether it describes the means to be used in doing the project, and whether it defines the evaluable product to be submitted at the end. The committee must also judge the project's academic validity from the standpoint of the disciplines in which it falls; its practicability, given the student's time and experience; and whether it is of sufficient magnitude to justify its status as the culmination of the student's academic career. Should a proposal not be approved, the student is given a written explanation of why it was rejected, and told what he can do to bring the proposed project up to standard--making even unsuccessful proposals the occasion for a learning experience. Preparing the Thematic Project proposal marks the first time many students have defined a major academic problem on their own--let alone proposed the means of solving the problem. The process helps the student prepare for the time when, at work or in graduate or professional school, he will have to design and carry out projects of his own.

The typical Thematic Project is built upon the foundation of general education and advanced courses in the student's Area of Concentration. The student usually takes additional courses and may do field work related to the project. Thus, since students build their projects step by step, developing the necessary skills sequentially, they do not become overwhelmed at the prospect of completing a major project without help.

Since the Small College admitted only freshmen when it opened in Fall, 1972, the Thematic Project program is just beginning to show results. By Spring, 1974, 20 Thematic Project proposals had been submitted to the Thematic Project Committee. Twelve proposals have been approved; eleven students are now engaged in course and field work for their projects; and one project has actually been completed, the student having graduated from the college. Seven students have had the general idea of their projects approved, but need to rewrite their proposals; and one student has had a proposal rejected. Topics for approved Thematic Projects have ranged from a study of youth gangs in South Los Angeles, to an ecological field study of a region in northern California.

The faculty has enjoyed the experience of seeing students' creative energy applied to worthwhile projects, and of helping students learn to direct their own learning. Students who plan and carry out thematic projects gain skills which should increase their chances for future academic or professional success. And students whose field work has taken them into the business world meet people working in the students' area of interest, who may help the students gain employment suited to their skills.

However, many problems arise in designing a program like the Thematic Project. Faculty in the Small College are already working under a heavy load. Supervision of Thematic Projects, or serving on the Thematic Project Committee, involves additional work which does not fit into the standard ways of accounting for faculty time. Yet both an individual advisor (for continuing guidance) and a committee (to assure uniformity of standards) are essential if the projects are to continue to meet the academic standards of the college.

Grading Thematic Projects also presents problems. A Thematic Project involves a variety of learning experiences, but, since they are all part of the same project, it is inappropriate to grade each separately. Perhaps Thematic Projects should be treated as graduate schools treat Ph. D. theses: the candidate receives no letter grade for his dissertation; it is either acceptable or unacceptable, and, if the latter, it must be redone so that it is acceptable. However, the current grading policy of the California State University and Colleges system puts a limit on the number of units a student may take on a Credit/No Credit basis.

Many students, too, express concern about being able to do a major independent project, and some faculty members wonder whether all students can in fact complete one. Above all, there is the problem of maintaining academic standards, both in uniformly assigning units to different types of work and in evaluating the acceptability of the final products.

The Small College faculty recognizes that these problems do exist. Nevertheless, the faculty plans to continue working with the Thematic Project and looking for ways to solve the problems because of the value to the student of doing such a project. Perhaps the value of the Thematic Project requirement, to at once expand and deepen the student's education, can be appreciated by reflecting on these words of Jerome Bruner:

> What do we mean by an educated man? I think that, at the very least, an educated man should have a sense of what knowledge is like in some field of inquiry, to know it in its connectedness and with a feeling for how the knowledge is gained. An educated man must not be dazzled by the myth that advanced knowledge is the result of wizardry. The way to battle this myth is in the direct experience of the learner--to give him the experience of going from a primitive and weak grasp of some subject to a stage in which he has a more refined and powerful grasp of it. I do not mean that each man should be carried to the frontiers of knowledge, but I do mean that it is possible to take him far enough so that he himself can see how far he has come and by what means.[2]

[2]Jerome Bruner, On Knowing, Atheneum Books, New York, 1964, p. 109.

Experiential Education

The term "Experiential Education" is used to describe a variety of learning experiences which extend the student's formal education beyond the classroom, and enable him to gain practical experience while earning units of academic credit. In a sense, "experiential education" is simply an extension of the standard practice of giving academic credit for the learning gained from field work, laboratory work, internships, and clinical experience. Experiential education, however, integrates the student's field and job experience not only into a single course, but into his entire program.

Experiential education in the Small College can be a part of any element of a student's program: general education, Area of Concentration, electives, and Thematic Project. The Small College experiential education program not only helps students integrate formal academic knowledge with life experiences, but, in many cases, helps them secure employment using skills gained while in college.

Experiential education can include many types of experience, as long as academically valid learning objectives can be specified in advance. For instance, students can gain credit for work experience in which the learning objectives can be related to the student's academic field of interest or--as general education--in which the objectives lie in some area other than the student's major. Field experiences, both in the student's major or related to another academic field, are also eligible. The Small College has given credit also for internships. These allow students to participate in a responsible position in some operating organization; the student may choose to alternate between full-time study on campus and full-time work with the organization.

To receive credit for any of these types of experiential education, the student must submit a written description of the learning goals to be met. The Experiential Education Coordinator then evaluates the proposed experience in terms of its academic relevance, and recommends the appropriate number of units to be awarded upon successful completion of the learning objectives. Credit is awarded only when the objectives agreed upon have been attained. Final evaluation involves the student's own evaluation of the experience, a detailed list of the activities performed and the skills learned, and, when applicable, the work or field supervisor's evaluation of the student's performance. For the individual student, sixteen quarter units of experiential education is ordinarily the maximum allowable toward the Bachelor of Arts.

Under special circumstances, students may also receive credit for academically valid past experiences, especially common in the background of mature students. Because of the special importance of maintaining academic standards in granting credit for past experience, the Small College requires that such past experience be clearly related to the student's educational or occupational goals, that the student describe in writing the learning that took place, and that he provide documentary proof that he actually had the experiences in question. In addition, past activities granted academic credit must be such that they would be awarded credit if undertaken by a student currently enrolled at California State College Dominguez Hills.

The following examples may serve to illustrate the kinds of learning experiences which have been awarded credit under Experiential Education in the Small College:

Work Experience. Several students interested in pursuing a career in teaching have worked as teacher aides in the surrounding school districts. They have worked under the supervision of a master teacher who has provided them with the normal experiences associated with the duties of a teacher.

Internship. One student was admitted into an internship sponsored by the Los Angeles County Police Department. This student was responsible for studying the turnover problem affecting one of its units and preparing recommendations for reducing this turnover. She has subsequently used this experience as the field work component for her Thematic Project on Personnel Management.

Past Experience. One student was awarded academic credit for his experience connected with the Veterans' Administration Hospital. The student, a former drug addict, was admitted into a rehabilitation program which included group counseling sessions. He kicked the habit and subsequently was asked to serve--and did serve--as a volunteer and coleader of similar counseling groups. This experience provided him with the background to serve as an advisor to other county and state drug abuse centers. He is presently working with the VA program on campus and pursuing an Area of Concentration in Human Studies. His future goals include working as a drug counselor with the VA. This student was awarded credit for his experience as a counselor, group leader, and advisor, which contributed to his skills in his area of interest.

During the 1973-1974 academic year, approximately 40 students were enrolled in Experiential Education per quarter, representing about twenty percent of the student population at the Small College. Most of the students work out of economic necessity. (A student questionnaire indicates that seventy percent of Small College students work for pay; the mean number of hours these students work per week is 22.9. For the data, see Appendix E.) Thus, the Experiential Education program allows the faculty to develop a student-centered learning experience around activities in which the student is already involved.

Students can accelerate their progress toward the Bachelor of Arts degree through enrolling in Experiential Education. Further, the Small College has expanded the usual scope of Experiential Education beyond that of work experience alone. A variety of life experiences can be integrated with a student's academic career, and can provide a depth and breadth of experience often lacking in a purely academic program. An important future goal is to develop within the community a greater number of Experiential Education opportunities for the students, preferably related to the academic program of the Small College. Meanwhile, the Small College program in Experiential Education is an integral part of the curriculum, and policies for its efficient administration have passed the test of practice.

CHAPTER II

THE WRITING ADJUNCT: AN ALTERNATIVE TO FRESHMAN COMPOSITION

Required composition courses that fail to teach students to write have long been the bane of both students and faculty alike. During the past two years at Small College, the faculty has developed an innovative writing program that has proven successful not only in improving the quality of student writing but in the perhaps more difficult, and surely more important, task of engaging student interest in the process of writing. Small College students have overwhelmingly opted for the Writing Adjunct when given the choice between it and a traditional composition course; in fact, they have frequently returned to the Writing Adjunct after fulfilling their composition requirement, requesting the opportunity to take additional Writing Adjuncts just to improve their writing. Our experience indicates that it is not against the task of writing itself that students rebel but against the rigid structures that they believe are only peripherally related to the actual issues they face when they try to write.

The Writing Adjunct is an individualized composition course which can be offered in conjunction with any college course. The student proceeds at his own pace to complete a set of goals specified for him individually. The writing required in a regular course becomes the basis of the composition assignment as well. Attaching the writing program to a regular course recognizes the fact that students write best when they have something to say. The research done for the particular course, whether it be philosophy or environmental science, provides the student with appropriate subject matter for his paper, and he always has the added incentive of knowing that his paper is for credit in the regular course as well as for expository writing credit.

Perhaps the most vital feature of the Writing Adjunct program is that it does not restrict the teaching of writing solely to the "English" department. The program operates on the assumption that all college students should learn to express their thoughts in writing, whatever their discipline. Thus a Writing Adjunct student is free to write a paper in any discipline: biology, anthropology, political science, or chemistry, and when he does so he learns the conventions of writing proper to that discipline.

The Small College requires that a student take from three to five Writing Adjuncts; the requirement may be completed at any time prior to graduation. Students are urged to spread their Writing Adjuncts through their college career, taking one in their first year, a second midway through their course work and a third in their final year.

Thus a student is urged to work on his writing throughout his college career and he comes to see writing as an integral part of his college education rather than an arbitrary course requirement to be satisfied.

Historical Development

The original Design Team for the Small College made no plans for the improvement of student writing, a fact which, as Dr. W. Spalding noted in his evaluation of last year's progress, was a "rather remarkable oversight when one considers the near unanimity of educators on the poor quality of students written work." The initial idea of the Writing Adjunct was generated by members of the Small College faculty during the first Summer Institute in 1972. The Writing Adjunct operated during 1973 but it did so as an overload on existing faculty, and many of the possibilities of the initial concept went unrealized.

In the 1973-74 academic year a special one year position was funded by the California State University and Colleges' Fund for Innovation. Though the program is now in full operation, a permanent faculty member having been assigned to it, it is still in the process of evolution. Much of the packaged material used in the adjunct is not fully developed and complete evaluations are yet to be made. Here is a description of the Writing Adjunct as it now operates; also included is a discussion of the many advantages the faculty believes it to have as well as a realistic appraisal of the problems another campus might face in implementing the program.

At the beginning of the quarter, the student selects a course or combination of courses in which he will be doing at least seven pages of writing. Before the student actually begins work on his writing, he is given a brief diagnostic test to determine whether or not he has the basic skills that would enable him to work effectively in a self-paced writing program. If a student is severely lacking in basic grammatical knowledge, he is directed to a self-study package. When the package has been completed the student will likely be ready to enroll in the Writing Adjunct program; if not, he is directed to a specially equipped learning laboratory. The student who feels he would benefit from a traditionally-taught composition course is urged to take one.

Once the student and instructor have agreed on the goals for a particular adjunct, the student may meet with either the Writing Adjunct instructor or a trained tutor. If it is the first time the student has taken the Writing Adjunct a file is set up to record his progress; the same file is

kept for all his Writing Adjuncts so that at the end of his last Writing Adjunct there is a complete record of the writing he has done in the program. The student and the Writing Adjunct team stay in contact through individual meetings which are usually initiated by the student when he reaches an impasse in the development of the paper. Regular individual discussions of the writing project provide an opportunity for ongoing dialogue, encourage the student to become fully engaged in his writing, and, needless to say, eliminate the incidence of "ghost-written" papers.

When the student has completed a draft of his paper, he submits it to the Writing Adjunct where the Writing Adjunct instructor or tutor then reads the draft and develops a detailed analysis sheet which discusses both the strengths and deficiencies of the draft. The student's file with his background writing sample and previously stated goals provides a context in which to evaluate the paper. Since the Writing Adjunct is always offered Credit/No Credit, the issue is never to label the paper with a grade but to edit the paper constructively, providing the student author with suggestions that will encourage his own writing ability. The comments on the analysis sheet are signed so the student is able to contact the person who critiqued his paper and discuss any recommendations that seem puzzling.

The student then revises his paper, returning both the edited draft and a copy of the final paper to the Writing Adjunct where it remains in his file as record of his progress. This process is repeated for each paper in the course. Students in the Writing Adjunct are given the opportunity to submit any writing they do in the course they have designated, and they regularly avail themselves of this opportunity even though it means they must prepare their draft earlier than usual and be willing to rewrite their papers.

Some matters of a general nature, such as methods of exposition, principles of paragraphing, and the development of thesis statements, are handled more efficiently and more effectively (considering the function of discussion) in class sessions than on an individual basis. For this reason a small number of class sessions and a tutorial workshop have been prepared for each of three levels of the Writing Adjunct and these classes are offered once each quarter. Each class includes a brief assignment in order to evaluate how well the student has learned the material presented. If necessary, the student is directed to additional material and assignments in one of a number of texts kept in the resource library in the Writing Adjunct Office. In the case of class conflicts, the student is given the option of completing a self-study packet.

During one week of the quarter, several workshops are conducted. For scheduling reasons, the workshops are repeated several times a day for three consecutive days. All students in the Writing Adjunct program are required to attend at least one of these workshops. In each workshop students read a sample paper and develop a critical analysis of that sample paper. Then, after a general discussion students exchange papers, and each student develops an analysis sheet for a fellow student's paper. The exercise puts the student in the role of editor for a fellow student author. As an editor, the student addresses himself to specific difficulties in the context of writing required in a regular course. He comes to see that syntactical errors obscure his ideas as much in a psychology report as they do in his history paper, that his anthropology instructor is as concerned about his ability to express his understanding of the course material as is his English instructor, and that the ability to write is not a luxury reserved for people in English courses (English instructors have always known this) but a vital part of his education.

When students in the Writing Adjunct program have been given the opportunity to do additional work related to their own writing problems, they have shown great interest. The student who used to skim the margins of a "corrected" paper and to read the coded symbols as criticism, now rereads the paper itself and works with the aid of specific recommendations to separate run-on sentences, regularize verb tenses and untangle syntactical nightmares in order to make the words communicate his ideas.

When the required work for each Writing Adjunct has been completed the student receives a written evaluation of his progress. The evaluation is anecdotal in form and assesses his progress in terms of his stated goals, recommending areas in which he should work during future adjuncts. Through the experience of the Writing Adjunct the student learns and actually employs the principles of expository writing. He earns two units of credit in expository writing at the same time that he earns credit in another course, thus helping him to accelerate. The Writing Adjunct may be completed at any time during the quarter; the student may apply the units he earns toward the General Education requirement in Basic Subjects or count them as electives.

If a student wishes to challenge the basic requirement, he is asked to submit as wide a sample of his writing as possible (usually three or four papers of differing types). This writing sample is circulated to a panel composed of the Writing Adjunct instructor and two other faculty members for evaluation. The faculty members independently decide

whether the student in question has mastered the faculty-generated goals which have been established for each of three levels of the Writing Adjunct. The independent results are collated and a decision made as to whether or not the student should receive units. If he is to be granted units, he may be granted as many as six, and thereby be free of the Writing Adjunct requirement, or as few as two, leaving him two Writing Adjuncts to complete. The testing out procedure may be initiated by the Writing Adjunct instructor, by a course instructor who recommends a particular student, or by the student himself. Students can initiate testing out at any time in the quarter. Since the writing is always being done for another course, the student's progress is not hampered in any way.

The fact that the Writing Adjunct program is adjunctive to other courses implies a commitment on the part of the faculty as a whole to the improvement of student writing. The faculty of the Small College has been actively involved in the Writing Adjunct program from its initial conception; through generating goals for the three levels of competence within the program, designating courses, serving as members of a panel to evaluate student writing for testing out, and keeping the Writing Adjunct informed of the writing they require in their own courses. It is significant that once approached no instructor has refused to work in some capacity with the Writing Adjunct.

The Writing Adjunct instructor serves as a writing coach, who meets with the student on an individual basis, or keeps in touch with the student through a tutor, and thus comes to know the student's individual writing problems. Our experience shows that students of widely varied abilities are highly motivated to work on their writing provided they see the work they are asked to do as being suited to their needs. It is important that the Writing Adjunct program be directed by an instructor who is both fully qualified to teach student writing and who honestly enjoys working on the ambitious and sometimes frustrating task of helping students learn to write. Finally, because of the interdisciplinary nature of the Writing Adjunct program, the Writing Adjunct instructor must be able to relate to students and faculty in a wide range of fields of emphasis.

Peer Tutors

The problems of working closely with sixty students in the individualized program led to the development of an auxiliary program of student tutors. Experience to date

indicates that the advantages of employing student tutors in the program extend beyond considerations of cost effectiveness. (More extended discussions of the benefits of peer tutoring can be found in Chapter IV.) The tutors, selected students who had completed their writing requirement, were trained in the procedure of editing papers and met at intervals during the quarter to discuss common problems. They read and edited student drafts, met with students to discuss specific writing problems, evaluated tests and assignments, and assisted in the preparation of course materials. Without exception, the tutors testified both to the difficulty of their task and to the intensity of their learning experience. As they communicated the "how" of learning to write, they developed a consciousness of their own writing styles, and an ability to edit effectively. One morning a tutor proudly announced that he had put his own paper in a pile of drafts he was reading and drawn up an analysis sheet for the paper complete with editorial comments. When he set about revising his paper, he was amazed at how helpful his own advice was. This is not to mention the advantage of the liberal education they received while reading papers on everything from the Extinction of the Blue Whale to the Experience of Death and Dying.

The single biggest difficulty in the operation of the Writing Adjunct program was the faculty time involved in individualizing writing programs. A further difficulty of communication resulted from the fact that the Writing Adjunct students seldom meet together as a class. However, carefully planned packaged materials, regular funding for a student assistant, an established tutorial room, and a well-placed message board can alleviate these problems in the future.

CHAPTER III

INTERDISCIPLINARY COURSES

Innovation in the Small College has taken place not only in curriculum design, but in individual courses. From its inception, the Small College has been commited to interdisciplinary instruction. This chapter will begin by discussing, and giving examples of, several ways of designing interdisciplinary courses; it will conclude by describing two of these courses in detail.

Three ways of staffing interdisciplinary courses have been used in the Small College: a single professor trained in more than one discipline; team teaching; and "complementary courses." (This last method may be of special interest to State College faculty, because it required less administrative flexibility than conventional team-taught courses.)

Individually-Taught Interdisciplinary Courses

In Appendix C, we have included ten Small College catalog descriptions of individually-taught interdisciplinary courses. These examples should provide some idea of the possibilities available to faculty and students in a program which encourages the creation of interdisciplinary courses by individual faculty members. The titles are:

Elixir of Civilization: Oil
Experience of Death and Dying
The Great Archetypes in Myth and Literature
Helping Our Community
Magic and the Supernatural in Literature since 1850
Physics of Hearing
Poverty
Readings in Black
Science Fiction: Its Relation to Science, Philosophy, and Myth
The Scientific Revolution
Utopias

Team-Taught Interdisciplinary Courses

In a world in which academic training is by discipline, the most obvious way to achieve an interdisciplinary perspective is to have faculty members from several different disciplines teaching in the same course. Interdisciplinary team teaching has become a popular type of innovation in a number of programs, and the Small College is no exception. Almost every Small College faculty member has chosen to be involved in at least one such course. In Appendix C are catalog descriptions of six interdisciplinary team-taught courses in the Small College. The titles are:

Creative Film Making
Environmental Perspectives
Ethnographic Field Work
Images of Man: Myth and Reality
Life Styles
Urban Textures

Four more team-taught courses are described immediately below.

The course "Fundamentals of Vision" treated the structure of the human eye and the processes that lead to the "seeing" of an object by the human mind. It was taught by a physicist, a psychologist, and a biologist. The topics included were the anatomy and physiology of the eye, the role of the brain in vision, light, the image-formation process and light detection, theories of color vision, the role of experience in interpreting stimuli, visual illusions and visual defects. The course provided the physicist with a context in which to apply physical laws, and the biologist with a rationale for requiring anatomical knowledge and developing concepts of function; the psychologist, in turn, applied this material in developing purely psychological concepts of perception without having to develop independently the physics and biology. The interdisciplinary perspective was strengthened by having all three faculty members present at most class sessions, so they could cooperate in discussions and explanations with the students.

"Darwin and Darwinism," taught by a biologist and a historian of science, began with an introduction to modern evolutionary theory, so that students would understand the basic biological ideas before studying their history. Then, the history of the relevant biological and geological ideas were treated; students read about Aristotle, Linnaeus, Cuvier, Lyell, Malthus, and Robert Chambers. The heart of the course was the reading of Darwin's Origin of Species in the light of the historical and biological knowledge the students had gained. The class then took up the impact

of Darwin's ideas, focusing especially on social Darwinism and on the interaction between Darwinism and Christianity. Rarely are students exposed to the roots of a scientific concept and a modern in-depth treatment of that concept in the same course. Besides understanding the concepts covered in the course, students came away with a deeper understanding of the relationship between scientific ideas and other sorts of ideas, and with an unusual perspective on today's debates about evolution.

"Self and Understanding," taught by a philosopher and a psychologist, explored the question "Who Am I?" through models of the rational and irrational self. Philosophical and psychological themes developed included: empiricism vs. rationalism, freedom vs. determinism, conscious vs. unconscious, the self in relation to others, and self-communication. The course explored how identity develops, and the values people incorporate into their self-concept. Participants both discussed and experienced, through activities and simulations, different ways of knowing one's self.

Introduction to the Social and Behavioral Sciences

The one-year sequence, "Introduction to the Social and Behavioral Sciences," included three one-quarter courses: "Topics," "Methods," and "Theories." Their purpose was to give the students an interdisciplinary introduction to the social and behavioral sciences. Seven faculty members were involved: two psychologists, an anthropologist, a sociologist, an applied behavioral scientist, a political scientist, and a philosopher. The instructors hoped to provide the students with a general comparative introduction to the various disciplines, to show how they differed and yet were related in approaches to a problem, the types of problems investigated, methodologies, explanations, and theories. The goals for the students in the "Theories" course, for example, were to describe what a theory is and how a theory is used; to recognize the names of important theorists in each field; to identify assumptions, themes, conclusions, and completeness of the contribution to explaining behavior of each exemplary theory presented; application of each theory to social and behavioral science problems; to use these theories to develop one's own theory for the explanation of specific behaviors. Five major theorists were treated: Freud, Marx, Weber, Durkheim, and Sartre. Connections and comparisons were made between them; each theorist was presented through selected writings by and about that theorist. In all three courses, the faculty members themselves expected--and indeed received--a good introduction to the fields of their colleagues in other disciplines. The constant interchange between faculty in

class raised the intellectual differences between practitioners of various disciplines to the level of explicit discussion, and thus taught the students much about the thinking and professional interaction of social and behavioral scientists.

The Social and Behavioral Sciences course was a valuable learning experience for the faculty. Many students learned a great deal, wrote good papers, and achieved many of the goals that the course had set for them. However, some problems, together with the great expenditure of faculty time, has led the Social and Behavioral Science faculty to design other courses to meet the same goals.

In any team-teaching enterprise, the size of the problems seems to increase according to the fifth power of the number of teachers involved. It requires super-human effort to coordinate the ideas of seven people into a coherent course; communication can break down because it is difficult to keep everyone informed of all that is happening. In the Social and Behavioral Sciences courses, faculty members understandably hesitated to make policy decisions without the consent of their colleagues, so that students often had to wait for needed information. Grading student papers was not wholly uniform, and it was hard to maintain a central system of record-keeping. In addition, seven people are bound to have different enough teaching styles to generate some conflict; team teaching provides enough potential conflict situations with only two people. It seems essential that instructors involved in team teaching should seek each other out voluntarily, and design a structure together which takes account of their unique personal and intellectual qualities.

In addition, the introduction to so many disciplines was simply too hard for freshmen lacking experience in any of them. The students felt they did not have enough background to integrate different readings from so many fields, and they had trouble following the discussions, which often attained levels too advanced for them.

Experimentation is necessary to find the best way to provide interdisciplinary team teaching at the college level. But experimentation involves risks; the decision not to offer the Social and Behavioral Sciences courses again suggests that the enterprise was not a total success. We hope that others, interested in the same goals and attracted by the plausibility of the original plan, will avoid the difficulties we encountered, while emulating those features of the experiment which seem to have the greatest value.

General Remarks on Team Teaching

Interdisciplinary team teaching usually increases the quality of the learning experience for a student taking a single course--unfortunately, by increasing the quantity of faculty man-hours used. Under current administrative methods of accounting for faculty time, faculty members who team teach receive only partial teaching credit for their efforts, even though their workload in a team-taught course may exceed what would be required in a course either team member taught alone. If interdisciplinary team teaching is to be more widely practiced, some modification in the standard methods of accounting for faculty time will have to be made. In addition to having competent faculty, freedom to devise curriculum is needed to encourage a wide range of interdisciplinary classes. Measures designed to guarantee the integrity of departmental offerings sometimes inadvertently also serve to prevent interdisciplinary courses from being offered.

Complementary Courses

"Complementary courses" are closely related but separate courses, given in the same academic quarter or semester by two or more faculty members. The courses can be different approaches to a common subject matter or similar approaches to entirely different subject matters. Such a linked set of courses can achieve the rewards of an interdisciplinary team-taught course with few of the disadvantages commonly encountered in team-taught courses. An additional advantage of complementary courses is that two faculty members in different departments, with the approval of their own departments, can design and offer such courses to students with no special administrative arrangements except for publicity.

Two sets of complementary courses have been given in the Small College: a Greek literature--Greek thought pair, and a physics-chemistry sequence.

Greek Literature and Greek Thought

"Greek Literature" and "Greek Thought" gave the students a chance to learn about classical Greece from the perspectives both of literature and of the history of ideas. The syllabi were designed after an agreed-upon division of labor between the instructors, a historian and a professor of literature. The parallel planning meant that overlap in the material could be avoided, so that each course could deal in more depth with its material than would have normally been possible.

Yet the breadth of team-taught courses was available to the students also, because each faculty member could use a great deal of material not actually covered in that individual class. For instance, when the literature class discussed Aristotle's Poetics, the teacher knew that the students were familiar with Aristotle's philosophical presuppositions from his Ethics and Politics; one faculty member characterized this situation as "having a simultaneous prerequisite to draw on at will."

One useful technique is the occasional use of time in common. The two courses were scheduled one right after the other (10-11:30, 11:30-1) in the same room, so that it was possible to hold a joint class meeting in the 11-12 time slot when the material seemed to make this desirable.

Students taking the Greek Literature final examination were urged, on one question, to apply the philosophical and historical background learned in Greek Thought to the question of continuing themes in Greek Literature. Again, in the final paper in Greek Thought, students were encouraged to test their generalizations about Greek thought on literary, as well as historical and philosophical, examples. Students who took both courses consistently described their enjoyment of the enrichment one course brought to the other.

Students often say that their most rewarding experiences in college were when several classes they happened to be taking somehow paralleled each other, and what they were learning meshed. The complementary course recognizes this benefit and institutionalizes it; conscious recognition means, of course, that the benefits can be heightened and the meshing made more effective. The benefits seem to be gained without the problems often encountered in team-taught courses, such as the possibly inequitable division of workload, clashing classroom styles, or sacrificing depth for breadth.

The two faculty members involved are designing a similar set of linked courses focusing on the seventeenth century. In the Humanities, the complementary course option should lend itself not only to differing time periods, but to different cultures. Adding other disciplines besides literature and history might be of value; the Greek course, for instance, would be enriched by the existence of another parallel course given by an archeologist or by an art historian. Thus, this experiment suggests a number of exciting future possibilities.

Complementary Courses in the Sciences

The Small College science program includes a year-long series of parallel courses in physics and chemistry. "Introduction to Chemistry" and "Mechanics" provide students with the basic concepts of chemistry and physics. After taking these courses, the students then take "Atomic Structure" and "Chemical Bonds," which assume the two earlier courses as prerequisites. Later, the students take "Statistical Thermodynamics." which uses the discussion of the gas laws in the "Introduction to Chemistry" course. In turn, the "Statistical Thermodynamics" course becomes the foundation for "Solutions and Equilibrium" and "Reactions of Carbon Compounds." Similarly, courses in "Electricity and Magnetism" and "Waves" lead the way into "Molecular Spectroscopy" and "Quantum Theory."

To be sure, most physics and chemistry departments use each others' courses as prerequisites: the physical sciences are built on a common theoretical foundation, with different emphasis in application; the Small College program was designed to make this explicit. The instructors were able to eliminate the repetition of many common topics which are used in both chemistry and physics; but, equally, they were able to improve and elaborate their presentation of those common topics they thought should be covered from the perspective of both disciplines. The science instructors found that careful planning let them cover the chosen material in their own discipline in more depth, while covering common topics in a better planned and more effective way. Both instructors report that the students found these carefully integrated courses to be an effective learning sequence.

For the 1974-1975 academic year, the instructors plan to extend the concept of complementary science courses by presenting the fundamental concepts in biology, chemistry, and physics in courses unified around the theme "energy."

General Remark on Complementary Courses

The requirements for instituting complementary courses, which can be met in almost any college, are the existence of two or more faculty members who think the possibilities are worth exploring, a common agreement to plan together, and enough publicity so that students can take advantage of the opportunity. Complementary courses help break down the isolation of departmental offerings, and help make a "curriculum" more than just a collection of courses.

Specific Courses: "History of Modern Thought" and "Teaching Young Children What You Know or Are Learning"

History of Modern Thought

"History of Modern Thought" provided an introduction to some of the major ideas which have shaped the modern world, through close and careful reading of the works of those who originated, introduced, or effectively propagandized for these ideas.

The "innovation" of teaching history and philosophy by reading the great books of the past goes back at least to the Alexandrian scholars of the 4th century B.C. More recently the procedure has been the heart of the general education programs at Columbia University and at the University of Chicago. In the Small College, the special features are three. First, and most important, the course has been designed to mesh with the Writing Adjunct program, and both Modern Thought and Writing Adjunct have gained much from the association. Second, in keeping with the Small College philosophy of individualized instruction, the Modern Thought papers have become an effective vehicle for teaching clear thinking at the individual student's own level of accomplishment. Finally, the course has become a cornerstone of the interdisciplinary Civilizations area of concentration; concentrators have been urged, though not required, to take it.

Students in the Small College, as indeed at most state colleges, come from a wide variety of educational backgrounds. Some sail through Descartes and Locke; others have trouble understanding single sentences. A student who cannot even summarize a particular argument cannot participate fully in a class discussion with students who can read, refute, and rehabilitate the argument the first time through. If learning is to take place for each individual student, the intellectual tasks to be performed must be set at the individual student's level. In a large class, this is almost impossible. The careful scrutiny of sequentially-written one-page papers in Modern Thought, however, provides one method of individualizing instruction. The professor, in responding to the individual student's written work, can set goals for that student's next paper. (This process is even more effective when the student is enrolled in the Writing Adjunct.) The one-page size of the papers was chosen because it forces the student's attention to the ideas and the clear expression of them; as one student put it, "There's no place to hide in a one-page paper."

The improvement in student writing and in the clarity of the students' thought as expressed both on paper and in discussions has been immense. The excitement generated in class, and the students' new sense of the relevance of ideas in understanding the world and in living one's life, sustained student interest through difficult readings and through the process of writing and rewriting papers.

The students' acquaintance with the classics of the western intellectual tradition gives them insights into many other fields, fields in which they never dreamed Modern Thought would help them. For instance, in a course discussing the atomic bomb, one student asked about a passage in Robert Jungk's Brighter than a Thousand Suns in which Oppenheimer is compared to Faust. A student taking Modern Thought explained the meaning of the comparison. He thus helped the class understand Jungk's picture of the scientist forsaking his political and social responsibilities to pursue the endless--and never wholly satisfying--quest for knowledge about nature. The student also explained the centrality of Goethe's Faust to German thought--so that Jungk could expect his readers to understand the comparison immediately--because of the book's place in German education. This student's contribution enhanced the class's understanding of the role of atomic scientists in the postwar world.

Great Books courses work only when taught by people who believe in them. In addition, for a single instructor to teach such a course effectively, he or she needs a good background in both history and philosophy. Still, if there is the will and the background, the courses seem worth giving. The western intellectual tradition, like it or not, underlies a great deal of modern, as well as classical, discourse.

The value of the course may have been best expressed by one of the authors sometimes studied in it, himself a product of a Great Books education: "Reading maketh a full man; conference a ready man; and writing an exact man."[3] Or it may have been best expressed by a student's one-line anonymous comment: "You taught me to analyze and criticize a philosophy. That's something I will always be grateful for."

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[3]Francis Bacon, "Of Studies," The Essays, or Counsels Civil and Moral, L, 3rd edition, 1625.

Teaching Young Children What You Know or Are Learning

The last course to be described, "Teaching Young Children," was an experimental teacher-training course. No certificates were given, no prerequisites set, the course was a part of no existing program, and used no guidelines from the standard curriculum. The course was designed to evoke and promote solutions to a series of questions and problems present at all levels of American education except nursery school. (In fact, the instructor believes there is a sense in which the nursery school might provide a model for the rest of the system since at that level students are encouraged to be creative, intellectually independent and innovative, and to tie formal academic learning to experience and art. In the nursery school, education is offered to the person as a useful tool and a way of life.) The course was devised to find out what a young child can learn, and how a teacher can teach what can be learned. Substantive answers to these questions might suggest a whole series of alternatives to present curricula and teaching methods in teacher-training programs and in practical grade school education.

Here is the way the instructor evaluated the course: I set up a class in which college students were to teach young children what they knew and/or were learning, to test the assumption that children could learn difficult and relatively advanced concepts of social and physical sciences, concepts which far exceed what is usually defined as their "grade level." Since youngsters' physical, manipulative and academic drill skills are far less developed than their ability to think, I hoped that the college students would teach the little ones simple physics, geometry, history, urban studies, etc. At the same time I wanted to teach the college students that once children can see certain phenomena as "interesting" (that is, accept them as problems worth solving), almost nothing can stop them from learning complex skills and searching out various solutions. Many of the child "solutions" would be absurd, spectacular, innovative and indicative of surprising sorts of "logic." I wanted the college students to forget that they were after right answers. I wanted them to encourage the little students to be unafraid to express unorthodox and untaught solutions, and to praise and validate as many attempts at solutions as possible; that is, to understand what each child was trying to do. Each person is always trying to do something, and what they need, more than to be set right and corrected, is to be shown how to do what it is they want to do. I thought that if the college students were flexible enough, they could give the child the sense that, however his or her solutions to a problem may seem in "normal" frameworks, they are perfectly reasonable and reasonably connected to a whole panoply of other considerations. I hoped that would build a kind of confidence usually lost in situations where a child is educated by constant correction.

This approach ultimately requires some change in curricular content, a shift to topics, to the "problems" approach. Traditional skills become an adjunct rather than the center. The students encouraged in this manner not only can learn what are sometimes considered difficult and abstract concepts, but can build upon them quite rapidly.

But where are the teachers who are actively able to use their knowledge to perform such wonders? What would happen if in fact our school system switched from the correctional skills approach to a "learning discovery" mode? Have our young college students been taught in such a way that they would be able to operate in the free-wheeling style required to go beyond "right Johnny, wrong Johnny?"

I assumed that college students would find it easier to move into this way of teaching if they taught something they knew quite well. I assumed they would at first be teaching from their academic subject major, since that would be the area in which they were most expert. I was wrong. Not one student in the class elected to teach something he had learned in an academic area in high school or college. The topics they felt they "knew" were sewing, painting, gardening, tennis, woodworking, cooking, and other hobby skills. While the range of subjects certainly afforded some fine opportunities to some youngsters, I wanted to test something else. I therefore required that the second project be to teach something the student had learned from an academic subject in a college class.

For most of the students, Project #1 had gone quite well since they had the opportunity to concentrate on teaching and on the children. Some students explored nontraditional class structures; others worked on a tutorial basis with just one youngster. The college students, teaching what they knew very well, were able to tolerate a variety of approaches. They were able to let the youngsters work out their own ways, inventing stitches, planting in unorthodox manners, and so on. They were eager to make use of opportunities to "teach," presenting related information, suggesting ideas and questions which the youngsters did not notice, and tying other subjects to the one under study.

The difficulty came when the students were asked to teach recently acquired academic knowledge. First, they tended to be more stiff, and uneasy, not sure what they "knew" or had learned or could teach. One student decided to work with a group of ten-year-old students to make a film. Her project, in addition to the film making, was to test the idea that one could teach <u>while</u> one was learning.

The film was excellent; the ten-year-old students did a good deal of the work, planning, and execution. But by and large, the college students found it more difficult to be flexible and tolerant of variants and unanticipated responses where they were teaching recently acquired academic subjects in which they had had relatively little experience (one or two courses, one or two textbooks).

I suspect these difficulties were in part caused by the teachers'" lack of overall knowledge and confidence in the areas they were attempting to teach. They were much more dependent upon the words in their texts or lecture notes and tended to be afraid to stray too far from "correct material." Possibly, however, the students were more unyielding because traditionally the student's attitude toward the subject matter of academic disciplines is very serious and the language without joy. We have taught the students to worry as they learned, and they could not help but apply these lessons to themselves as teachers.

I think that Teaching Young Children What You Know or Are Learning opened the way a bit for some students; it did a great deal for me. One course cannot change a college student's attitude toward his own learning and thereby toward his teaching of the young. The course may have shown some students where the struggles lie. It has shown me a few more of the steps necessary to bring about change.

CHAPTER IV

"LESS TIME, MORE OPTIONS"

The constraints of time, format, and department within which most academic programs operate sometimes hamper learning by forcing all educational experiences to fit the same framework. Students with every possible variation in educational background are grouped together for a quarter or semester, and presented with a fixed portion of information within that particular time frame. Individual levels of performance are measured in relation to the student group with little or no consideration given to the individual characteristics of the students in the group; the slow starter is as easily overlooked as the student in need of greater challenge.

The Small College has experimented with ways of breaking out of these constraints, including breaking out of the standard time frame, with varied and variable length courses and with a special scheduling innovation known as Intensity Week; questioning the proposition that any course equals four units; going beyond the department by exchanging faculty; providing ways to learn without formal classes, such as packaged courses and independent study contracts; and giving students the chance to do course work at their own rate of speed: "self-pacing." In addition, students can "test out" of any course in the Small College.

Not all the options the Small College has tried are new, but together they have produced exciting possibilities. Students in great numbers have availed themselves of these options, and have expressed positive views about them (See Appendix E). Forty percent of Small College students have averaged more than sixteen units per quarter; given the present rates of progress, some students who entered the program as freshmen in fall, 1972, should graduate after three years, with the full 186 units required, by spring, 1975. Self-pacing, packaged courses, and testing out have contributed to this result; so have experiential education, the Thematic Project, and Independent Study. In addition, simply providing a climate in which accelerated progress is encouraged gives some students the courage to enroll for a higher number of units than they might otherwise have done, and to complete them successfully. This chapter will describe the way many of these options have worked in the Small College; though there are many methods, they have a common underlying theme: flexibility.

Intensity Week

Intensity Week was a week during which no regular classes were scheduled, so that special one-week intense learning experiences could be undertaken by faculty and students.

Some kinds of courses are especially suited to intensity week scheduling. Some activities require intensive full-time work by the student, and cannot otherwise be performed. Other experiences, which could indeed occur in the ordinary academic schedule, take on a different character when the students are involved in nothing else for a given week. Finally, some subjects, which might not justify the full expenditure of a faculty member's time over an entire quarter, might well be worth teaching if a convenient small time-block in the schedule existed.

In the Small College, Intensity Week provided a chance for all these types of activity. By advance planning, it is possible to set aside one week in the quarter for Intensity Week, and to accomplish the goals with little apparent effect on the rest of the curriculum. A separate Intensity Week catalog, listing the available courses, was distributed to students several weeks in advance.

The idea which originally produced Intensity Week was that of a professor of American intellectual and legal history who wanted to involve students in intensive playing of a Simulated Society Game. During this one-week experience, the students found themselves playing the roles of governor and governed, and themselves had to face the moral questions involved in weighing advantages for one's small group against the common good.

Another course which benefited from Intensity Week scheduling was "Urban Textures." Two sociologists, using the "field" of Los Angeles, took students on field trips to various interesting sites of the city. Under the guidance of the faculty members and with the provision of a state car, the students learned about some people and institutions of Los Angeles from a sociologist's perspective. They wrote papers on topics of their own choice, growing out of the week's experience. Given the spread-out nature of the city of Los Angeles and the difficulty of getting students together outside of scheduled classes during the academic quarter, something like the free time blocks of Intensity Week was essential to these field trips.

In "Landscapes of Southern California," science students took a week-long field trip; such field trips are essential to a deep and thorough understanding of the natural world in its real, as opposed to laboratory, setting. They are, generally, difficult to accomplish in the framework of the State College calendar. Similarly, students took a field trip as part of the Environmental Perspectives Course (See Chapter I).

In response to student requests, one faculty member gave a course on "The Jewish Experience in America." The course was intended as a series of brief introductions to a wide range of possible experiences. It included role-playing by the students in different American-Jewish life styles and in different ethnic experiences in America, and the reading of a wide variety of sources. The instructor felt that a full course on this subject would have been an impossible luxury for the Small College (given the other curricular demands on its faculty) and was grateful for the one-week chance to provide a course in which a number of students seemed quite interested.

Several problems arose in connection with Intensity Week. One was what to do about nonparticipants. In the Small College with its emphasis on Independent Study and self-pacing, students who did not wish to participate in Intensity Week had little trouble finding academically respectable alternatives. The faculty members who did not participate were, in many cases, involved in supervising independent study, or helping students catch up. If Intensity Week were adopted in other institutions, one might have to avoid its becoming a week's vacation--though, of course, students choosing to treat it as a week's vacation would receive no academic credit.

Another problem occurred in scheduling Intensity Week. The first Intensity Week (1972-73) in the Small College was scheduled in the middle of a quarter; this broke up existing classes in an inconvenient way. In 1973-74, it was scheduled at the end of a quarter; here the problem, pointed out by the students, was that it overlapped final examinations. More careful advance planning can easily resolve these problems.

One last problem is financial. More field experiences, especially field trips in the sciences, could be undertaken if there were money to pay for transportation and materials.

Intensity Week provides possible types of educational experiences which are almost impossible with a conventional schedule. The disadvantages seem few, and can be eliminated by careful planning. Intensity Week can even benefit the nonparticipant student by providing the chance for independent study. Rarely does a "mere" scheduling innovation have such a substantial educational effect.

Classes of Differing Length

Recognizing that not all subjects are naturally one quarter in length, the Small College has experimented with courses of other lengths. So that students can plan reasonable programs, it is convenient for courses less than a quarter in length to fit evenly into the quarter. Accordingly, in 1972-73 courses lasting three, six and nine weeks were used; in 1973-74 courses of five and ten weeks in length were used. Some five-week courses required work of the same intensity as standard four-unit courses; two units would be awarded for these. Other courses spread what might be three weeks' standard course work over five weeks, to give students needed time to reflect or incubate ideas; the unit total here might be one or one and a half.

This kind of flexibility recognizes the different speeds with which different subjects "sink in," and allows instructors to design courses to take advantage of this factor. In addition, having "mini-courses" less than a quarter in length means that courses can be given on certain topics which might not justify a full quarter of a faculty member's time. In some cases, faculty members have provided for three-week independent research projects within the normal ten week frame, as is often done in graduate seminars. Such a course may meet on a normal schedule for six weeks, break for three weeks while the students follow independent study contracts and meet individually with the instructor, and then reconvene for the final week when students present their projects to the class and summarize the principles of the course.

Variable Unit Courses

Some Small College courses offer a range of units. During the first two years of operation, approximately 25-30% of the Small College courses were offered as variable-unit courses. In such courses, the student could choose a workload to suit his available time. In awarding units for a particular course the Small College has substituted the criterion of student workload for the traditional norm of number of hours in class. On the basis of the actual work the student will be doing, the individual faculty member recommends to the faculty in his Area of Concentration the number of units appropriate for his course to carry. The Small College Curriculum Committee monitors unit totals among the different Areas of Concentration to insure uniformity.

Variable-unit courses take a variety of forms. In a certain sense, any course offered with a Writing Adjunct is a variable-unit course. Course instructors have frequently built an augmented unit into their courses for the student who completes a specified work project; for example, an additional research paper. In independent study, the student and instructor design an individualized contract specifying course objectives and designating units. Typically, courses which involve field work will grant different numbers of units depending on the nature of the work the student does.

The list of ways of varying course lengths and unit totals is not exhaustive, nor have the ways tried been equally successful. Extensions of work beyond the time frame of the course, for instance, create an increased burden on the instructor who is already teaching a "full" load. Still, these methods are a start in the direction of allowing a student the opportunity to schedule the pace of his learning.

Going Beyond the Department: Faculty Exchange

Program enrichment through faculty exchange is a natural development in the Small College, since it is actually a part of California State College Dominguez Hills. In a sense faculty exchanges have been effective in the Small College since it began operation, one of its charter faculty members having been on leave from the large college, and one holding a joint appointment.

During the fall quarter of 1973, the Small College began an experimental program of faculty exchanges with the parent institution. Such exchanges have several advantages. Since the instructor from the large college designs an innovative, interdisciplinary course for the Small College while the Small College instructor teaches a course in his specialty, the exchanges both expand the curriculum and contribute to the professional growth of the faculty members involved. In addition, exchange helps increase communication between the different programs on the campus.

Thus far, exchange arrangements have been made on an *ad hoc* basis, being negotiated between the chairman of the particular department in the larger institution, the Director of the Small College, and the faculty members involved. The exchanges which have occurred to date, include: a Small College biologist teaching in his specialty in exchange for a Small College-oriented course in genetics; a Small College historian of science teaching the history department's

History of Science course in exchange for a course on the Biblical Prophets; a Small College psychology instructor teaching developmental psychology in exchange for a course in the psychology of consciousness; and a Small College sociology professor teaching a course in ethnic minorities in exchange for a course in the sociology of painting.

To date, the exchanges have been made so that the faculty members trade equivalent teaching loads, so that no balance-of-payments problems arise. Well coordinated faculty exchanges can, without increasing costs in any way, provide the benefit of a more varied curriculum to both partners in the exchange. The California State University and Colleges system has recently announced its intention to experiment with campus-to-campus faculty exchanges; these would have many of the same advantages already outlined, and the Small College's experience suggests they too will be successful.

"Student-taught" Courses

"Student-taught" courses are classes that individual students propose, and teach, in the program. Each such class is taught under the supervision of a faculty member, who maintains ultimate responsibility for it. The content and the unit totals assigned to such a course must be approved both by the Small College Curriculum Committee and by the entire faculty before the student is allowed to teach it. The student is expected to have expertise in the subject proposed; the faculty member is expected both to be continually available, and to assist the student in carrying out the responsibilities of a teacher.

In the winter quarter of 1974, one student taught a course on Feminism, which included class discussions, guest speakers, field trips, and verbalizations of the class members' thoughts about feminist topics. Sociological, historical, and psychological material was presented by the student instructor. Another student taught several Beledi dance courses, in which students learned steps in Beledi dancing, and how to play zils, to put a dance together, to do solos, and to make costumes.

"Student-taught" courses benefit both the students in class and the student teacher. Students acting as teachers can provide interesting and unusual courses which would not otherwise be offered. Students who might be intimidated by the teacher's status as a faculty member may learn better in a less threatening situation.

Proposing, planning, and teaching a course is a major learning experience for the student who does it. The Small College faculty awards experiential education credit to the student teacher in recognition of this learning.

Students do encounter problems when they become teachers. It may be hard for a student to coordinate enough materials, and to choose materials of sufficient quality, to enrich a course and provide intellectual stimulus for students. Nor would a student plan a course as theoretical in content as would a faculty member. Inexperienced instructors cannot generally plan in the light of the kind of experience which helps predict the success of teaching techniques. Nor might a student teacher anticipate the great demands on his time which teaching will make. The faculty supervisor's assistance is necessary to alleviate these problems.

In the Small College courses, the students' faculty supervisors reported that each student instructor possessed enthusiasm for the subject, a real desire to gain experience in college teaching, and knowledge in the areas covered. They handled their classes very well. As long as close faculty supervision ensures the academic validity of student-taught courses, the courses can be a worthwhile component of a college program.

Peer Tutoring

Because of the limited amount of faculty time, many teachers have experimented, in courses with large enrollments, with having advanced students act as tutors for beginning students. But the benefits extend far beyond cost-effectiveness. Students are sometimes more accessible to other students, both psychologically and physically, than are faculty members. In addition, the student tutors themselves benefit greatly. The cooperative relationships engendered between student and tutor provide students with a new attitude to the process of learning and to their relations, while learning, to other students. In the Small College, student tutors have functioned effectively in several different courses, including computer programming and psychology; they have also been valuable to the Writing Adjunct program.

The "Introduction to BASIC Computer Programming" course treated the principles of programming, the BASIC programming language, and the time-sharing system used by the California State College Dominguez Hills computer. The nature of the subject made it seem best to design the course so that the students would pace themselves through it, since in a time-sharing system, the computer operator is essentially in a one-to-one dialogue with the machine. Thus, after a few lecture-demonstrations, the student can be given a set of problems to solve by writing programs on the computer; unless the student needs help, he can then proceed to solve problems on his own.

What happens is this: The student writes a program and runs it on the computer; the program is then saved in the computer's memory. The student puts the computer print-out of the program, and the results of the run, in the instructor's mailbox. The instructor evaluates the work by actually running students' programs and putting his comments directly into the computer. The student returns to the computer, calls out the program from the memory, and reads the instructor's comments. One might think that hundreds of students could participate in this way; the fact is, however, that many students need help in planning and running their programs. With a large class, one instructor cannot provide this help for every student. Peer-tutoring, however, has solved this problem.

The first group of students taking the BASIC course was sufficiently small so that the instructor could deal with all the problems. From this group, the instructor chose tutors for the next group of students, and distinguished for the tutors between the kinds of questions they could legitimately answer for their students, and those which the students should work out for themselves. The tutors then helped the students complete and run their programs. The instructor in BASIC found the system to work extremely well. Given the importance of computers in modern life and the ease of learning BASIC, this would seem to be both an important and a readily adaptable method of teaching large numbers of students about computers.

In the "Introduction to Psychology" course, the tutors chosen had previously taken an introductory psychology course. The task they were given was to teach the students how to pick out the important concepts from the textbook. The tutors indeed helped. Moreover, one unanticipated and pleasing effect of having students help students in this way was that the students in the course, in addition to working with the tutors, began working together to master the material. Thus there was a transfer of the responsibility for learning from the teacher to the students.

On occasion, students are reluctant to help one another because grading is "on the curve." In the psychology course as in the BASIC course, evaluation of student performance was based on mastery of previously described objectives. Thus, students could genuinely cooperate in helping other students learn without jeopardizing their own chances for a high grade.

Self-Pacing

Self-paced learning is a component of most Small College innovations. Among the specific designs that encourage students to use their time effectively, the Small College has experimented with packaged courses, the adoption of behavioral objectives, and the implementation of testing-out procedures.

We shall describe the Small College experience with packaged courses. This chapter will then conclude by describing one self-paced course which weaves together many of the methods mentioned in this chapter, and which also conveys some of the excitement both students and faculty can experience in a well designed self-paced program.

Packaged Courses

In some subjects, self-paced courses can be packaged to relieve scheduling pressures. A "packaged course" or module generally includes: a detailed statement of objectives, frequently in behavioral terms; descriptions of activities in which students participate in order to learn the expected behaviors; a description of resources available to students (e.g. faculty, other persons, reading lists, tapes, films, slides, computer programs, field trips, laboratories, tools, instruments); and clearly stated criteria by which student progress will be appraised. Such a packaged course may be started and finished at any time in the quarter.

The Small College faculty has used commercially prepared packages for teaching statistics and English skills. Courses packaged by the faculty, including self-study packages in American colonial history, computer programming, study skills, the Writing Adjunct, and a tape-recorded introductory course in sociology, have also been used.

In the "American Colonial History" course, the instructor developed a set of packaged materials which encouraged students to meet objectives customarily omitted from programmed-learning situations: to recognize the ambiguities in the relationships found in historical and social-scientific study; to deal with the frequent and often unresolvable conflicts between professional historians on subjects conceived by the layman as fully known and closed to dispute; and to think critically about the materials in the course, recognizing that in many situations no simple answer will solve the problems posed.

Traditional disciplines usually require an introductory course that will allow students to grasp the basic principles of the discipline and give background for more advanced courses. In the Small College, such an introductory course, "The Subject Matter of Sociology," was put on tape. The discussion of that course will illustrate many of the advantages and disadvantages of packaged courses in general.

The taped course was given during the Winter and Spring quarters of 1974. Ten two-hour tapes had been recorded during the "Subject Matter of Sociology" class in Fall, 1973. Students read textbook assignments and listened to the tapes; in addition, they were encouraged to see the instructor once a week. Besides freeing the instructor from teaching a routine course, the taped course provided flexible hours for students to learn the material at their own speed. Because class discussions had also been taped, the students could listen to questions and comments by other students and could then return to the instructor with their own questions. Some problems in this course stemmed from the nature of tape recordings as such. Having only one set of tapes limits the number of students who can sign up. Another concern is the audibility of the tapes, since the course depends on them.

Other problems which arose in this course are common to many packaged courses. Some students had a tendency to slacken their progress more and more as the quarter progressed, with a few taking the full ten weeks to finish a five-week course. For the student who can pace himself efficiently, the self-paced features of this course were excellent; some students, however, require more external discipline. Also, in a taped class, or any self-study class, the student misses the valuable educational experience of having his ideas evaluated by his peers.

Still, on balance, the instructor felt that the class benefited students, freeing them to proceed at their own pace and to choose their own "class" time. And the initial rationale still holds: the existence of a packaged course frees the instructor for other tasks which require his first-hand presence.

An Experiment in Self-Pacing

This chapter will conclude with a description of one instructor's experience with a self-paced course in psychology, "Individual Differences and the Exceptional Person." Some unexpected problems arose, but, rather than abandon a potentially valuable concept, the instructor modified the course and successfully overcame these problems. An account of the entire experiment should be of value to anyone who wants to teach an effective self-paced course.

"Individual Differences and the Exceptional Person," according to the catalog description, was to cover the physiological and psychological factors involved in individual differences; the etiology of differences, descriptions of exceptional people and ways of developing their potentialities; the varieties of "exceptional" people, including the mentally retarded, the gifted, the visually, orthopedically,

speech, and auditorily handicapped; those with cerebral palsy; and the emotionally disturbed. The instructor prepared a set of behavioral objectives for the course, both of the conventional (cognitive) type and the affective type, so that the students knew what they were expected to do, and so that the instructor could assess when they had done it. The instructor also designed a challenge examination based on the objectives, which could also serve as a diagnostic test to find the students' strengths and weaknesses, and as a final examination for the course.

"Individual Differences" was first offered in the Winter quarter of 1974. Rather than have a regular class meeting time, the course had individual student-initiated sessions with the instructor. About twenty students signed up for the course that quarter, but none completed the course in the allotted quarter; only two students completed as many as six of the ten chapters of the textbook. The instructor sent a questionnaire to the students to find out why they had not yet completed the course. Most of the replies indicated that students had misunderstood the concept of "self-pacing," believing that self-pacing just meant going slower than normal. Most also expressed a need for more structure in the course.

The instructor changed the course for the Spring quarter in response to the suggestions she received in the questionnaire. So that students would understand the nature of a self-paced course at the time they began the course, the instructor tape-recorded an introduction to the course, including a description of the elements of self-pacing and suggestions for individualized studying techniques. To provide more structure, the instructor scheduled a class meeting time during which students could discuss topics with her, take unit-progress checks, and tutor each other.

As it happened, there was only one room for all the class activities, and no student assistant was available. Unable to employ students who had previously mastered the course as tutors (since there were none), the instructor used the students who were currently taking the course as tutors for each other. The students were permitted to master the units in whatever order they wished, so that, by the middle of the quarter, each unit had been mastered by some students. The students then began helping each other with the units they had mastered.

The students responded enthusiastically to this method. Furthermore, as they were surprised to discover, the peer-tutoring method used in this course is the same method often used for individualizing instruction for "exceptional" people in special education. Through experiencing it themselves, then, the students learned an educational method they can use if they become professionals in the field of special education.

One problem remained: assigning grades. This is difficult in a self-paced course because most teachers, in giving grades, assume that normative comparisons can and must be made, and that some students will not achieve a high level of mastery. Self-paced programs, however, need not make these assumptions. In fact, the assumptions of self-paced programs are just the opposite: individuals are to be evaluated on their progress relative to themselves, not relative to other individuals; and all students will eventually achieve an "A" level of mastery, because the learning methods and materials are individualized. At present, there seems to be no easy solution to the conflict between the need for a nongraded system for a self-paced course and the constraints of an educational system which requires the assignment of grades.

Nevertheless, the students rated the course favorably. The instructor found that, in contrast with the completion rate for the Winter quarter, sixty-eight percent of the students completed the course before the final date. All the elements of this course--the opportunities for self-pacing, peer-tutoring, continual and immediate feedback, and individualized instructional methods and materials--contributed to these favorable results.

CONCLUSION

Mentoring

All the experiments undertaken by the Small College are departures from what college students are used to. The freedom from time constraints provided by self-pacing, the chance to take interdisciplinary courses, and, above all, the Small College policy of letting individual students design their own programs, depends on a strong advising system. The Small College calls this "mentoring." Upon admission, each student is assigned to a faculty member who is to serve as guide, advisor, and generally as "mentor." Students are encouraged to see their mentors whenever problems arise, and most students do so.

The mentor system encourages close student-faculty relationships. At least one person on the faculty is familiar with the student's interests and problems, and the student feels that someone cares. Such a system avoids the impersonality of mass higher education; students are less likely to leave school over a problem which can be resolved with a little attention when that attention is readily available.

The most obvious function of the mentor system is academic advising; this includes helping the student choose the courses which will help him graduate, and advising him about possible careers and further education. Thus, while the Small College program allows the student considerable choice, it also provides him with a great amount of support. Mentors can suggest alternatives, and help the student discover his own preferences; frequently the mentor works with other faculty members in counseling students about academic problems.

Students often approach the mentor with personal problems as well. Sometimes these are school-related, sometimes completely personal. When the student needs only a sympathetic listener or someone to suggest alternatives, the mentor functions as a counselor. When the problem seems more severe, the mentor may refer the student to professional counseling services available on campus. Mentors also sometimes serve as tutors for their mentees, on topics ranging from how to read technical monographs to how to use the library. The mentor may refer students with serious educational difficulties to the Tutorial Center, or to remedial classes.

Since the mentor is familiar with the student's entire college career, and may--given the size of the Small College--have had the student in one of his own classes--he is able

to write letters of recommendation for his mentees which are based on extensive evidence; and he can draw upon evidence with respect both to the student's academic abilities and personal qualities.

The mentor function, as one might guess, is an extremely time-consuming one. Small College faculty time-logs indicate average workweeks of over sixty hours, sometimes with fifteen or twenty hours devoted to mentoring. Nevertheless, students point to the mentoring system as one major advantage of the Small College program. Of 75 students polled in one day's classes in Spring, 1974, sixty-four percent reported having conferred with their mentor that month, and twenty-eight percent had seen their mentor that week. This contrasts with the situation in many colleges, where students see an advisor only once a year. Furthermore in response to the question, "If you have not seen your mentor recently, is there another faculty member with whom you regularly confer?," thirty-seven percent answered "yes." This finding suggests that the mentor system has helped create a climate in which students find faculty accessible. The faculty believes that the mentor system has contributed both to the retention of students in college and to the success of the individualized academic programs Small College students pursue and hopes, therefore, to be able to overcome the time problems.

Focusing on the Student

Each of the innovations discussed in this report has been designed to meet the needs of students. The experiments undertaken by the Small College were intended for "a heterogeneous population of students, including EOP students," so that results would be applicable to the California State University and Colleges system. The Small College accepts any student who meets the admission requirements for California State College Dominguez Hills, and Small College students do form a heterogeneous and nonelite group. They meet the State College entrance requirements, but not with unusual distinction. They are diverse both in ethnicity and age (see Appendix F), and they do not form any kind of economically elite group (see App. E,#12). Thus the measure of acceleration Small College students have achieved, and their positive responses to many aspects of the program, have implications beyond the Small College.

In Spring, 1974, the Small College faculty administered a questionnaire to students in one day's classes. The results, recorded in Appendix E, indicate that the students like many of the distinctive features of the Small College program. The Small College's orientation toward liberal arts seems good preparation for most of the students' future

education. To the question "Do you plan to go to graduate or professional school?" sixty-seven percent answered affirmatively; twenty percent were undecided; and only thirteen percent said no.

Self-pacing is well liked by students. Of 73 students responding to a question on time-shortened degrees, eighty-five percent said that they expected, or would like, to complete the Bachelor of Arts in less than four years. Nineteen of the 73 said they had tested out of one or more Small College courses, with the nineteen having tested out of thirty-one courses. The Small College has stressed Independent Study as a mode of self-pacing, and fifty-one percent of the respondents reported having taken at least one Independent Study. "Writing Adjuncts are better than traditional composition courses" was agreed to by seventy-six percent of the students responding; sixty-four percent of the students agreed with the statement "My mentor has helped me in important ways." (The data on which these conclusions are based is in Appendix E.)

The Small College gives its students great flexibility in fulfilling general education requirements and in planning programs within their Areas of Concentration. Through the Writing Adjunct, the Small College provides a way to learn to write which is relevant to actual course work. Experiential Education allows the student to integrate classroom learning with the world outside the college. The Thematic Project gives students a chance to do an original and thorough piece of work on their own. The wide range of interdisciplinary courses offered has provided students an unusual type of educational experience. Self-pacing lets students proceed through the program at their own chosen speed. Students have found new roles as teachers and as active learners, cooperating instead of competing with their peers. The mentor system serves to coordinate all the features of the Small College program with the interests of the individual student.

The faculty has learned much from two years of the Small College. Students have learned much too, and not just in particular courses. The close student-faculty relations have helped students to learn in many different ways, to design individualized courses of study and, above all, to come to know that they, as individuals, are the most important part of the Small College.

APPENDIX A

General Education Courses

Chemistry of Photography

Hero As Madman: the World as Asylum

Human Sexual Function

Playgoing

Political Trials

Time and Timing Devices

Work in American Society

The Chemistry of Photography (5 weeks) Ken Gash

This interdisciplinary course will examine the science of photography, using the various stages in the development of picture taking as a vehicle for introducing the concepts of chemistry and physics which are relevant to each of the processes.

There were many different processes tried out in the early and mid-nineteenth century, and each of these provides some fascinating trips into the worlds of inorganic chemistry, organic chemistry, optical physics, and scientific as well as nonscientific methods of research. Modern processes for producing photo-induced images will be explored as much as possible, keeping in mind that the students are not science majors, but would like to learn something about science.

Hero As Madman: the World as Asylum (5 weeks) Lois Feuer

Many works of literature have as their central character a person who is "mad" in a social, moral or psychological sense; many others use an "insane" universe as a central premise. We'll be looking at how literature views the theme of madness/sanity in the individual and in society through various examples of these two groups.

From the first group, that which used a "mad" protagonist, we'll read Don Quixote, King Lear, The Sound and the Fury, The Heart of Darkness, and One Flew Over the Cuckoo's Nest. The second group includes Cuckoo's Nest again (this is a transitional book, drawing as it does on the themes of both groups), Waiting for Godot, some Kafka short stories, and Cat's Cradle.

Students will be asked to write one fair-sized paper (about 5-7 pages) and an essay final exam.

Some previous college-level experience with literature would be useful but is not required.

Human Sexual Function (10 weeks) Jack Hazelrigg

Human Sexual Function offers nonscience students an introduction to the anatomy and physiology of human reproduction. This module will emphasize the physical and current biological aspects of human reproduction, including: (1) a thorough examination of the anatomy and physiology of both male and female reproductive systems; (2) examples of abnormalities in the sexes and sexual response; (3) methods of birth control and their impact on society; (4) discussions of the symptoms, etiology, and treatment of various venereal diseases; (5) an overview of pregnancy and prenatal development; (6) lectures and readings in human genetics; and (7) a discussion of human birth defects as a consequence of environment and heredity. A field trip to Fairview State Hospital is included in this course.

Playgoing Bruce Tracy

We will be attending six Saturday night Los Angeles-area dramatic productions (reserved tickets), ranging from establishment to underground; occasionally we may talk with casts after the show, or just get together afterwards. The Monday morning meeting is to discuss the performance we've all seen. Evaluation is based on attendance and discussions, with perhaps a little writing. Total cost per person shouldn't exceed $25--and will probably run less. Guests (prearranged) are of course welcome.

Prerequisites: "Getting into Drama" or permission of instructor.

Political Trials (6 weeks) George Heneghan and Jo Ann Luke

Cross cultural, interdisciplinary and comparative analysis of eleven political trials from America, Latin America, Europe, Africa, and Asia. Case studies of the trials will be used to make cross cultural comparisons of judicial, legislative, political and social behavior and how they shape political institutions, traditions and systems.

Time and Timing Devices (5 weeks) Ruth Hsiung

Time always poses a puzzling question to human beings because of man's inability to stop, reverse, lengthen, shorten, or, in short, control it. In this course we will discuss the concept of time in the physical and biological world, the relation of time and space, the periodic phenomena in nature, and various timing devices used over the years, for example: pendulum, sun dial, clock, atomic clock, etc.

There will be only one test in this course. In addition, students are to write a paper on some topic related to time, or to make a device that will tell time. Besides the regular lectures, we will also visit the Museum of Science and Industry and Griffith Observatory. Both have collections on ancient timing devices.

This is a general education course for students with little science background.

Work in American Society (10 weeks) Barbara Chrispin

Objective: To develop an understanding of the factors involved in educational and career decision-making.

Choosing a career is much more complicated than simply wanting to be "a something." Effective decision-making requires planning and, for the college graduate, an extended period of education.

This course will focus on work as an institution in American society. Topics will cover aspects of work that students should be familiar with and understand in order to assess their options and make realistic choices.

APPENDIX B

Areas of Concentration

Civilizations

The Area of Concentration in Civilizations is designed to encourage students to explore the thought and institutions of one or more cultures, and through more than one time period. It can include work from a number of traditional disciplines: history, political science, sociology, anthropology, literature, philosophy, history of science, art, music, and religion. And, as with all areas of concentration in the Small College, it will include work that crosses the lines of all these disciplines to achieve a multidisciplinary approach. A Civilizations student may emphasize either the "history of ideas" or "institutions" or both. An area of concentration in Civilizations will involve three components:

1. 30 units in a "Field of Emphasis"--a cluster of closely related, often sequential courses (courses may include Experiential Education or Independent Study). This field can be a special area chosen by the student, in consultation with a Small College faculty member. It can also resemble a conventional "major," or a Large College major.

2. 15 units in courses related to the Field of Emphasis--with "related" defined in any defensible way. For instance, it can be an area similar to the Field of Emphasis, but of a different civilization; it can be a study of the same civilization, but in a different way; it can be a study of analogous problems in different ways and different civilizations. The "related" area can also provide a comparative perspective, or an extension of the original Field of Emphasis.

3. 10 units--electives in the general field of civilizations.

NOTE: If the 30 core units of the student's civilizations program are all in one area, at least some of the 15 related units or 10 elective units should encompass another perspective. "Area" here means time, place or mode of approach, e.g., if the 30 units are in contemporary studies, some work in pre-twentieth century should be done. If the 30 units are only with, say, European history, the student should do some study of another cultural tradition. If the 30 units are all in the history of ideas, some effort should be devoted to the study of institutions, and vice-versa.

Recommended for Civilizations students: the two-course sequence, The History of Modern Thought.

There will be a Civilizations seminar open to all Civilizations students, in which a common problem will be viewed from the

perspective of the several disciplines, with a two-person faculty team as coordinators. These seminars will be offered several times a year, and students are urged to take at least one seminar as a capstone to their work in Civilizations and summary to their careers in the Small College; when the topic varies, the seminar may be repeated for credit.

Human Studies

The world grows smaller with each passing day. More and more we find ourselves involved with what goes on between people. It is no longer as easy to escape from the affairs of our friends or our community or even the happenings of societies thousands of miles away. Because we can't hide ourselves from these interactions, it is important that we understand one another more fully as human beings. The Human Studies Area of Concentration provides a broad, interdisciplinary foundation for the student who is interested in learning about the experience of being human. The Area of Concentration in Human Studies allows the student to explore human existence from the perspectives of the social and behavioral sciences, and the biological sciences.

Possible Fields of Emphasis which the student may select under the Human Studies Area of Concentration. These are broad and varied fields in which the student may be interested. They do not exhaust all the possibilities and the student may feel free to develop other Fields of Emphasis of interest in consultation with faculty.

I. Social and Behavioral Sciences. This Field of Emphasis will involve a series of courses to be distributed as follows:

   A. A minimum of 22 units of core courses from at least two different disciplines to be distributed as follows:

      1. Eight units of introductory courses from at least two of the stated disciplines:

         a. Anthropology
         b. Applied Behavioral Sciences
         c. Political Science
         d. Psychology
         e. Sociology

      (In addition, courses in history, economics, geography, and interdepartmental area studies can be applied. Upon advice of the Small College Social and Behavioral Sciences faculty, some philosophy courses may be considered suitable.)

2. A minimum of four units from at least two different disciplines of methodology courses relating to any of the above disciplines.

3. A minimum of four units from at least two different disciplines of theory courses relating to any of the above disciplines.

4. A minimum of six units from at least two different disciplines of topics courses in the Field of Emphasis of Social and Behavioral Sciences.

B. A minimum of 20 units in one specialization which will be designed by the student and his mentor. This may be a cluster of courses in various disciplines directed toward a broader interdisciplinary study, or an individualized specialization, or a major in a traditional academic discipline such as those listed below.

II. International Relations. This program is designed to serve the needs of: 1) students desiring a general education in international affairs, 2) students planning graduate study in social science or area studies, 3) students interested in entering government service, 4) students planning careers in business, law, journalism or library science, and 5) students planning to teach social science in secondary schools.

Twenty units minimum from any three of the following disciplines or interdisciplinary courses combining these disciplines: political science, history, sociology, philosophy, anthropology, economics and geography are required.

The student should also master at least one modern foreign language: Chinese, French, Spanish, Russian, German, and Japanese would be the most relevant to a career in international relations.

Students should concentrate their courses in the three disciplines in one area such as East Asia, Latin America, the Middle East or the Atlantic area.

III. Traditional major disciplines. Students may also pursue a Field of Emphasis in a traditional discipline such as psychology, sociology, or anthropology.

IV. The Physician's Assistant Program. A "physician's assistant" assists the physician in making examinations and diagnoses, and provides direct patient treatment and care. During the 1973-1974 academic year, some Small College faculty members examined the physician's assistant training program offered at the Charles W. Drew Postgraduate Medical School. The Drew program includes interdisciplinary courses covering a number of academic areas, including anatomy, physiology, microbiology, mathematics, sociology, and psychology. A collaborative effort between the Small College and Drew was proposed as a Field of Emphasis in Human Studies; Small College students enrolled in this Field of Emphasis would receive academic credit for completing, as certified by Drew, the American Medical Association requirements for Physician's Assistant. The remainder (and larger part) of the requirements for the Bachelor of Arts would be completed at the Small College.

Science, Technology and Society

This Area of Concentration is designed both to provide students with a firm foundation in the understanding of science in general, and to offer students insights into the impact of science and technology on society. Depending on individual interests, students may design their programs in pursuit of a specialized field either in the applications or implications of science. This Area of Concentration includes three basic components: Basic Sciences; Perspectives on Science; and Topical In-Depth Studies.

A. Basic Sciences. This component begins with a required, interdisciplinary course Energy and Life. It is designed to introduce students to the field of natural sciences and the necessary terminology and background for the Basic Science core courses.

The core contents in this component are designed to help students gain a good understanding of one branch of science and to obtain an integrated view of science in general.

There are six topics in each of the following fields: biology, chemistry, mathematics and physics (see Table on page60). The first course listed in the table in each of the four fields is a prerequisite to all other courses in the program. While some of these courses are sequential, many of them may be taken in any order. Not all topics are required for all students. The list of all topics is provided so that each student can build an individualized program, using the first topic in each field and a number of other topics to form a coherent program in science.

BASIC SCIENCE CORE TOPICS

	Mathematics	Physics*	Chemistry*	Biology*
I	BASIC Programming	Introduction to Physics	Introduction to Chemistry & Gas Laws	Origin and Evolution of Life
II	Statistics	Thermodynamics & Transport Systems	Atomic Structure	Nature of Life
III	Precalculus	Electricity, Ionization & Electric Conductance	Chemical Bonds	Plant Structure & Function
IV	Methods in Calculus & Differential Eq.	Waves, Light & Spectroscopy	Solutions & Equilibrium	Animal Structure & Function
V	Computer Logic	Radiation Effects	Chemical Reactions Kinetics (Chemical)	Genetics and Development
VI	Partial Differential Equations	Instrumentations	Molecular Spectroscopy	Human Sexual Function

*The course Energy & Life is a prerequisite to any of these topics.

It is suggested that a student be proficient in at least two topics from each of the fields so that the students will have a basic understanding of these disciplines and/or an extensive program in one or more fields for those students who wish to pursue a specialized field.

B. Perspectives on Science. This component views science in historical and social contexts, and examines the impact of science on society. Students are required to take at least one topic from each of the following areas: Philosophy of Science; History of Science; Impact of Science.

C. Topical In-Depth Studies. In addition to the two basic components, students should take a group of topics to form a cohesive in-depth understanding of a field. Some of the possible fields of emphasis can be: Science and Society; Computer Technology; Science of Human Senses; Cybernetics (see also Social and Behavioral Science Field of Emphasis); Environmental Chemistry.

In general, a total of 55 units is required of students in this area.

The following are only a few examples of innumerable possible programs. The examples may be used to suggest ways to plan a program to meet the goals of an individual student. They are not intended to limit the options for an individualized program, designed by and for the student.

For someone who is interested in Computer Technology, the program may be as follows:

Basic Sciences: BASIC programming, Precalculus, Methods in Calculus, Energy & Life, Introduction to Physics, Electricity, Introduction to Chemistry, Atomic Structure, Origin of Life, Nature of Life.

Perspectives on Science: Scientific Revolution, Science Fiction, Man, Technology & Organizations, Philosophic Inquiry into Values.

Topical In-Depth Studies: Logic of Problem Solving, Computer Logic, Information Theory, Cybernetics.

For someone who wants to understand the Impact of Science, the program may be as follows:

Basic Sciences: BASIC programming, Statistics, Engergy & Life, Introduction to Physics, Thermodynamics, Radiation Effects, Introduction to Chemistry, Atomic Structure, Chemical Bonds, Origin of Life, Nature of Life, Animal Structure, Plant Structure, Human Sexual Function.

Perspectives on Science: Scientific Revolution; Oil; Energy; Politics & Ecology; Pasteur, Disease & the Origin of Life.

Topical In-Depth Studies: Energy, etc.

APPENDIX C

Individually-Taught Interdisciplinary Courses

Elixir of Civilization: Oil

Experience of Death and Dying

The Great Archetypes in Myth and Literature

Helping Our Community

Magic and the Supernatural in Literature Since 1850

Physics of Hearing

Poverty

Readings in Black

Science Fiction

The Scientific Revolution

Utopias: Good Societies and New Communities

Elixir of Civilization: Oil (5 weeks) Jon Veigel

The influence of oil on humanity has been, and continues to be, absolutely unique. It is a finite resource that society treats as if it were an infinite resource. We use it to make drugs, plastic, and gasoline without any real awareness of the options we foreclose to us and to future generations by so doing. To make rational choices we need to understand what oil is and how we get it. We need to understand the foreign policy and economic pressures that help govern its use. And finally we need to understand how it is now used and the substitutes available. Readings are from text and original literature. Evaluation is based on in-class participation, five one-page papers, and an essay exam. No specific prerequisites are required, though this course will be taught at an upper-division level.

Experience of Death and Dying (5 weeks) Sandy Wilcox

An investigation of the dynamics of dealing with one's own death and mourning the death of others. The course is meant to confront the natural processes of death as seen in dying cancer patients, the reactions of families to the death of a member, the responses of medical personnel, funeral rites, ethical issues in the social and personal control of human life, and death confrontations in suicide and war. Some study of literature, painting and sculpture, and music will be included.

Great Archetypes in Myth & Literature (10 weeks) Lois Feuer

The course explores the recurring symbolic patterns, images, and characters (called archetypes) in western mythology and literature. We'll be asking questions about where these archetypes come from, what some common examples are, how they get into literature and dreams, and whether their study can tell us anything about the structure of literature and the shape of human experience.

We'll try to get at these patterns several different ways, using the perspectives that psychology (Jung), epic (The Odyssey), the Bible, medieval romance (Sir Gawain and the Green Knight), drama (Macbeth), contemporary poetry (The Wasteland) and fiction (A Portrait of the Artist as a Young Man) have to offer.

While part of the course consists of readings and class discussion, students will have the opportunity to pursue a brief research project independently. This project will examine an archetypal pattern(s) in one of the readings or in a work (fables, fairy tales, movies, current event, historical episode, set of song lyrics) of the student's own choice, and will culminate in a paper of about 7-10 pages. A midterm and final exam are also required.

Helping Our Community (10 weeks) Humberto Gutierrez

This course will involve students in self-initiated projects at the community level. These projects can eventually turn out to be good experiences for the initiation of a student's thematic project. Projects can include:

(1) Finding community values. How to use anecdotal or quantitative instruments for the determination of community values. The influence of values (or lack of it) at the institutional level, e.g. schools, courts, business organizations, police force, etc.

(2) Helping students. Any individual can be involved in counseling or tutoring students at the college, high school or elementary school level.

(3) Story telling. There are Chicano, Black or Anglo oral traditions (jokes, animal stories, e.g., possum stories, etc.) that are being lost. If anyone is interested in collecting some of these stories, I will arm them with the tools.

(4) Any other projects deemed to be of service to any group of people are respectfully welcome in this course.

Magic and the Supernatural in Literature Since 1850 (10 weeks) — Bruce Tracy

The following ten books for ten weeks will take you through a wide variety of recent and near-recent novels and short stories, all of them trying to stretch your mind into the unknown worlds of magic and the supernatural.

We'll begin with the "children's" books on the list: Alice in Wonderland by Lewis Carroll, Winnie-the-Pooh and The House at Pooh Corner by A. A. Milne, and the Wizard of Oz by L. Frank Baum--defining our terms and setting objectives. Next we'll read several brief American novels of strange doings: The Turn of the Screw by Henry James, A Cool Million and The Dream Life of Balso Snell by Nathanael West, The Crying of Lot 49 by Thomas Pynchon, and Trout Fishing in America by Richard Brautigan--tracing the various worlds each writer elaborates (unreal, or simply unseen?). Finally, we'll ponder over three non-American stretchers of our minds: Steppenwolf by Herman Hesse, a German-Swiss; The Sibyl, by Par Lagerkvist, a Swede; and the prize of the group, Labyrinths by Jorge Luis Borges from Argentina--pulling from these as rich a conception as possible of just what magical realms twentieth-century creators find inhabitable.

Probably I'll talk about a book on Thursday--then the following Monday and Tuesday someone will lead a discussion or a panel on that book. Any discussion in which you take an active part becomes your "report" on that book; for the discussions you don't participate in, or miss altogether, you will need to write out your thoughts on the book(s) discussed. For each of the three groups of books, furthermore--children's books, American fiction, and non-American fiction--I want you to write a brief paper (3-5 pages) on some topic uniting the group through comparison or contrast. Early in the quarter you will decide whether you would prefer the papers or the discussions to count more toward your grade; you must do both, of course, but you may choose which will be weighted more heavily.

A number of independent study topics naturally flow from this, and you will be encouraged to pursue such cognate readings concurrently: Imaginary Religions (P. D. Ouspensky, Ursula LeGuin, Robert Heinlein, etc.), Children's Classics (Kenneth Grahame, T. H. White, Ruth Krauss, etc.); Christian Fantasy (C. S. Lewis, Charles Williams, George MacDonald, etc.), Metaphysical Fantasy (E. R. Eddison, James Branch Cabell, J. R. R. Tolkien, etc.), Poetry of Consciousness (Lawrence Ferlinghetti, Gary Snyder, Jim Morrison, etc.) and many others.

Note: This course is especially recommended for students with little prior experience studying literature.

Physics of Hearing (5 weeks) Ruth Hsiung

This is a comprehensive course on the physical processes that take place in and around the human ear. The four main topics to be discussed are:

The nature of a sound wave
The transmission of sound
The process of hearing
The musical sound

Poverty (10 weeks) Emory Holmes

In this course we will begin the study of poverty in the United States. We will examine some of the conditions of poverty in various sections of the country and among various groups in America. We will begin the development of an understanding of some of the consequences of poverty.

Several short works and selected readings will be required. Students will be encouraged to participate in classroom discussions.

Objectives:

To develop an understanding of the extent of poverty in the United States.
To examine some of the conditions which permit poverty to exist.
To understand some of the consequences of poverty on the life chances of the poor.
To develop an understanding of some of the interactions of race, ethnicity and poverty.

The student will be required to write a substantial paper on some aspect of poverty. Field visits will be encouraged.

Readings in Black (10 weeks) Emory Holmes

This seminar will examine some sociological and psychological themes that appear in works by black writers. Selected works of a number of black writers and thinkers will be read and discussed. All students are welcome. We will read Malcolm X, Carmichael, King, Bennett and other selected works. Some selected movies will be shown. Students will be expected to do the readings and take part in class discussions. A 10-page paper will be required.

Prerequisite: Written permission of instructor.

Science Fiction: Its Relation to Science, Philosophy, and Myth (10 weeks) — Marilyn Sutton

Science fiction enthusiast or neophyte, you can pursue your particular science fiction interest in this course. During the first six weeks of the course, we will meet three times a week to explore the relationship between science fiction and science, science fiction and philosophy, and science fiction and myth history.

Each week we will read one novel and several short stories drawn from the major writers in the field: Arthur C. Clarke, A. E. Van Vogt, Frank Herbert, C. S. Lewis, James Blish, Andre Norton, and Isaac Asimov.

During the following three weeks you will contract to pursue an independent study project on a major author theme, or problem of your own choosing. The independent study will culminate in a major paper (10 pages), an original science fiction story, or a creative project (model, film, etc.).

In the final week of the course, the class will reconvene and you will have an opportunity to present your project to the class.

The Scientific Revolution (10 weeks) — Judy Grabiner

Science as we know it emerged in the seventeenth century. This has been called the greatest intellectual revolution in the history of western civilization. What was the nature of this change? How did it come about?

What were the new scientific discoveries? What philosophical, religious, social, and economic causes promoted them? How much did the new discoveries owe to medieval thought? How much to Renaissance magic? How much to Greek philosophy? What impact did the new science have on philosophy, religion, and technology?

We will read three types of works. First and foremost, we will read selections from the works of major thinkers of the period: Descartes, Bacon, Galileo, Harvey, Newton. Second, we will read a general essay which gives an all-over picture of the period. Finally, individual students will read an additional primary source (or sources) in their major area of interest and write a short paper.

Students taking this course will come out of it understanding the nature of the experiments and ideas which created modern science, their philosophical implications, and the principal nonscientific factors which helped produce them.

Utopias: Good Societies and New Communities (6 weeks) — Marilyn Garber

In this course we will discuss several proposals for perfect or ideal societies and some of the issues that accompany the establishment of new and better societies: What is the nature of man? What sort of a society best suits this nature and best allows it to work itself out? What sorts of things from our present society and past history might be adaptable in the new? We will read about classical utopias and examine certain modern communities in order to gather evidence for the task of answering such questions as the above.

APPENDIX D

Team-Taught Interdisciplinary Courses

Creative Film Making

Environmental Perspectives

Ethnographic Field Work

Images of Man: Myth and Reality

Life Styles

Urban Textures

Creative Film Making (21 weeks) — Ken Gash and Marilyn Sutton

This course will explore both theoretical and practical aspects of film making. The class will divide into production units. These production groups will study principles of film making and prepare a script during Winter Quarter; shoot the film during Intensity Week; and then in Spring Quarter edit the film, add music and/or narration, and titles, and finally, show the films.

In the Winter Quarter class meetings will include discussions on the theory of film making and history of motion pictures, viewing of films for analysis and criticism, and practical experience in basic shooting techniques. Through these class sessions students will experience each of the basic aspects of film making--acting, shooting, scripting, production and editing. Individual production units will develop a script proposal and proceed to develop the script throughout the quarter.

Students should plan to be involved in all three sections of the course. Please note on your course sign-up card whether or not you have a 8mm camera.

Environmental Perspectives I: Basic Ideas (10 weeks) — Jon Viegel and Bob Giacosie

We invite your company and your best efforts, so that together we can discover how clear an understanding of our world is possible. To best do this, we must jointly mold a new discipline, that of environmental science, made by choosing and studying those aspects of older disciplines that most usefully aid us and by forging new tools when needed.

In this first course we will attempt to construct a framework of ideas about the environment that will support further study. What physical laws are boundaries to our rational action? How do we judge the rightness of an act affecting the environment? How do we judge anything environmentally?

To succeed we will need a mutual intense commitment to new ways of looking at things, to shared ideas and voluminous reading. We will stress the critical analysis of ideas and their application to the environment.

During the quarter you will prepare critiques of the works of others, answer critiques of your work, and write about the environment from your own experiences with it. You can also elect to take a writing adjunct in conjunction with this writing. For this effort you will receive one extra unit for any products in addition to the one unit received on successful completion of the adjunct.

Ethnographic Field Work (5+ weeks and extension into summer) — Fumiko Hosokawa and Sandy Orellana

This is a beginning methodology class in which we will be learning about and actually doing anthropological and sociological field work. During the first five weeks (last five weeks of quarter) the student will learn what an ethnography is and how to go about doing one. Differences between an anthropological and sociological ethnography will be examined as well as the problems and difficulties that one can encounter in doing ethnographic field work. The second part of the course requires extended field work during the summer. The student should plan on applying the research techniques learned during the five week period to various groups or societies he would encounter on his vacation. This extended field research would be especially applicable if the student visited an Indian reservation, went to Mexico, visited an ethnic barrio or just encountered any type of cultural group nearby. This particular assignment might also fit in very well with a student's thematic project.

Requirements: 1 exam, 1 ethnographic research paper due at the end of the summer research period.

Images of Man: Myth & Reality (10 weeks) — George Heneghan and Sandy Orellana

Objectives: To explore and compare by cross cultural and interdisciplinary analysis anthropological, cultural, linguistic, literary and political theories and writings about images, myths and models of man as they describe the nature of man, the nature of human nature and man and nature. To examine classical and modern anthropological, cultural and political views of man. To analyze various assumptions, concepts and theories of man as reflected in various cultural and political behavior patterns. Case studies from Latin American and Asian cultures and societies will be used. Political science will provide the contemporary perspectives, and anthropology the historical.

Topics will include: man and mythology, language, metaphors and models of man, modern views of man, voluntarism, determinism and materialism, man and aggression, man and "madness," man as a "true believer" in mass movements, and man's search for meaning and identity.

Books:

M. F. Ashley Montagu (ed.) Man and Aggression
Carlos Castaneda, The Teaching of Don Juan: A Yaqui Way of Knowledge
Eric Hoffer, The True Believer
Abram Kardiner & Edward Preble, They Studied Man
F. C. Northrop, Meeting of East & West
Philip H. Rhinelander, Is Man Incomprehensible to Man?

Requirements: Two 3-5 page papers and a final exam.

Life Styles (6 weeks) — Humberto Gutierrez and Fumiko Hosokawa

This course will be a survey and analysis of different types of life styles as they have been developed by various groups in our society. There will be a number of different life styles discussed such as the following: deviant life styles, ethnic life styles, class life styles, youth life styles, occupational life styles, and any other life styles that can be suggested. The emphasis will be on a sociological and philosophical analysis of these life styles, meaning the ideologies and thought that form the impetus for social movements and styles of behavior and the different social manifestations of these subcultural ideas and values. We will be concerned with the social significance of these life styles as well as their historical development.

The following books will be required for this module:

The Making of a Counter Culture by Roszak
The Politics of Experience by Laing
Life Styles: Diversity in American Society by Thielbar & Feldman
Either The Hobo by Andersen or The Hippie Trip by Yablonsky--Student's choice on this last one.

Urban Textures (6 weeks) — Emory Holmes and Sandy Wilcox

Field work in the city we live in. Exploratory field trips weekly designed to give the students an overall picture of the scope of Los Angeles in terms of geography, ethnic and socioeconomic differences in neighborhoods, social history, and resources for the students. The student will also produce a project on some aspect of the city that relates to his own interests.

APPENDIX E

Student Questionnaire

TABULATION OF STUDENT QUESTIONNAIRES

1. Do you plan to go to graduate school or professional school:

YES:	44
UNDECIDED:	13
NO:	9

2. If so, what kind:

GRADUATE:	22
CREDENTIAL:	6
MEDICAL:	2
LAW:	5
NURSING:	1
UNDECIDED:	9

2. Do you want to complete the baccalaureate degree in less than four years?

YES:	40
WOULD LIKE TO:	22
MORE THAN FOUR YEARS:	10
WILL NOT EARN A BACCALAUREATE:	1

3. Are you taking, or have you taken, any self-study (packaged) courses?

YES:	39
NO:	34

4. Have you tested out of any course?

YES:	19
NO:	54

If so, how many?

RAW DATA:	1,2,?,1,3,2,3,1,2,1,3,1,2,1,1,2,1,2,2
TOTAL:	31 courses
AVERAGE:	1.6 courses/student answering "yes"

5. Are you still working on any courses that have officially ended?

NO:	37
YES:	21
YES, TWO:	11
YES, THREE:	2
YES, MORE THAN THREE:	1

6. Have you taken any courses in the Large College this academic year?

YES: 52
NO: 21

If so, how many?

FALL: 35 courses total
WINTER: 48 courses total
SPRING: 52 courses total

7. Have you taken Independent Study?

YES: 38
NO: 37

8. Have you done any work toward your Thematic Project?

YES: 23
NO: 51

9. Have you earned any units under Experiential Education?

YES: 30
NO: 44

If so, how many?

TOTAL: 247 units
AVERAGE: 8.23 units/student answering "yes"

10. When did you last confer with your mentor?

LAST WEEK:	21
WITHIN THE LAST TWO WEEKS:	11
WITHIN THE LAST MONTH:	15
THIS QUARTER:	11
THIS YEAR:	14
NEVER:	2

11. If you have not seen your mentor recently, is there another faculty member with whom you regularly confer?

YES: 28
NO: 31

12. I work _____ hours a week for pay.

YES: 49
NO: 21

TOTAL: 1121 hours/week
AVERAGE: 22.^8 hours/week

13. I do volunteer work _____ hours a week. (17 Responses)

TOTAL: 155 hours/week
AVERAGE: 9.5 hours/week

14. My mentor tries to be helpful.

AGREE: 57
NEUTRAL: 10
DISAGREE: 2

15. My mentor has helped me in important ways.

AGREE: 43
NEUTRAL: 16
DISAGREE: 9

16. Another faculty member (not my mentor) has in fact helped me as if he/she had been my mentor.

AGREE: 39
NEUTRAL: 17
DISAGREE: 14

17. The mentoring function is really a farce.

AGREE: 10
NEUTRAL: 12
DISAGREE: 46

18. Writing Adjuncts have improved my writing skills.

AGREE: 35
NEUTRAL: 21
DISAGREE: 12

19. Writing Adjuncts are better than traditional composition courses.

AGREE: 53
NEUTRAL: 12
DISAGREE: 5

20. I like the idea of being able to get a degree in three years.

AGREE: 66
NEUTRAL: 4
DISAGREE: 0

21. I like self-pacing.

AGREE: 57
NEUTRAL: 7
DISAGREE: 4

22. I like having close student-faculty contact.

AGREE:	65
NEUTRAL:	5
DISAGREE:	0

23. I like the small size of the student body here.

AGREE:	64
NEUTRAL:	4
DISAGREE:	2

APPENDIX F

Student Statistics

STUDENT POPULATION IN SMALL COLLEGE BY ETHNIC GROUP*

Ethnic Group	Percentage
American Indian, Native American	0
Black, Afro-American, Negro	17.58
Chicano, Mexican-American	12.09
Oriental, Asian-American	5.49
Caucasian	63.19
Other, unknown	1.65

*These statistics were compiled by a student assistant who has personally met and talked with each Small College student.

AGE OF SMALL COLLEGE STUDENTS

In 1973-1974, the median age of Small College students was 19; the average age, 23. The "typical" student in 1973-74 was a sophomore or junior.

Year of Birth	Number of Students
1900-1909	1
1910-1919	0
1920-1929	6
1930-1939	10
1940-1949	30
1950-1959	135

ELIGILIBITY INDEX (A formula involving high school grade point average and Scholastic Aptitude Test scores)

SAT -- 3072 is the minimum score required for admission to California State College Dominguez Hills

Score Range	Number of Students
3072-3371	26
3372-3671	16
3672-3971	12
3972-4271	13
4272-4571	6

ACT (Similar formula involving American College test score and grade point average)

741 is the minimum score required for admission to California State College Dominguez Hills

Score Range	Number of Students
741-790	8
791-840	5
841-890	2
891-940	2
941-990	0
991-1040	1

Note: Students take either the ACT or SAT, but not both. Students whose high school GPA is above 3.20 will be admitted regardless of their test score. Fifty-one Small College students fell into that category.